SONY

3-798-839-11 (2)

Video Cassette Recorder

Operating Instructions

VHS

Hi-Fi

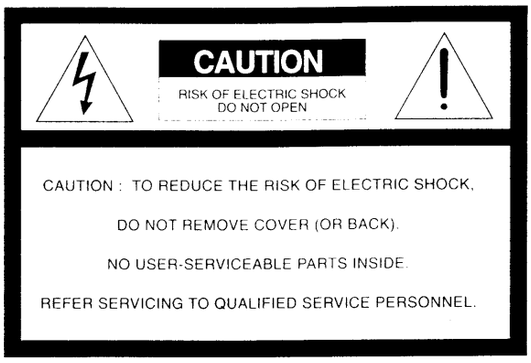
STAR SIGHT

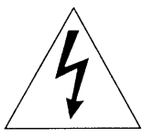
SLV-980HF

© 1995 by Sony Corporation

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

To prevent electric shock, do not use this polarized AC plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Precautions

Safety

- Operate the unit only on 120 V AC, 60 Hz.
- If anything falls into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your Sony dealer.
- Unplug the unit from the wall outlet if you do not intend to use it for an extended period of time. To disconnect the cord, pull it out by the plug, never by the cord.

Installing

- Allow adequate air circulation to prevent internal heat buildup.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Do not install the unit in an inclined position. It is designed to be operated in a horizontal position only.
- Keep the unit and cassettes away from equipment with strong magnets, such as microwave ovens or large loudspeakers.
- Do not place heavy objects on the unit.
- If the unit is brought directly from a cold to a warm location, moisture may condense inside the VCR and cause damage to the video head and tape. When you first install the unit, or when you move it from a cold to a warm location, wait for about one hour before operating the unit.

Information

For customers in the USA

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission may require authorization from the cable television transmission and/or program owner.

Owner's record

The model number is located at the rear and front of the unit and the serial number on the top. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

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Welcome!

Thank you for purchasing a Sony Video Cassette Recorder (VCR). Here are some of the features you'll enjoy with your VCR:

- Easy Set Up feature that sets up the clock, cable box control and presets channels easily using the EASY SET UP button
- Auto Clock™ Set feature that sets and adjusts the time and date automatically
- StarSight*1, is a subscription service that lets you quickly know what is on every channel for up to a week in advance and easily preset the VCR to record programs
- Cable box control that allows your VCR to control channel selection on most brands of cable boxes or DSS*2 (Digital Satellite System) receivers
- Adaptive Picture Control (APC) that automatically optimizes recording and playback performance
- Remote commander that features multi-brand TV control

*1 StarSight features licensed under U.S. patent numbers 4,706,121 and 5,151, 789. For licensing and subscription information, call 1-800-643-STAR.

© 1995 StarSight Telecast, Inc. StarSight is a registered trademark of StarSight Telecast. StarSight is a subscription service. VCR required for recording.

*2 DSS® is a registered trademark of DIRECTV, Inc., a unit of Hughes Electronics Corporation.

Introducing StarSight

StarSight is a subscription service that can provide you with on-screen TV program listings and simplify the task of programming VCR recordings.

With StarSight, you can quickly know what is on every channel for up to a week in advance. There are three different program guides available: Grid Guide (showing what is on every channel), Channel Guide (sorted by channel), and Theme Guide (sorted by categories). You can also get detailed information about each program, browse throughout current programs quickly, and tune to the program you're looking for.
One of the strengths of StarSight is that it makes recording easy. Whenever you want to record a TV program, all you need to do is press the ● REC button while highlighting a StarSight program guide selection. The VCR is automatically programmed to record that program.

StarSight uses an unseen portion of your local PBS station's signal to transmit data. You need to activate StarSight to receive program information.

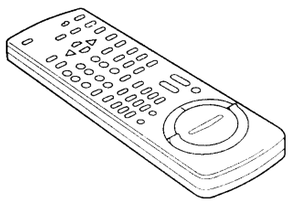
To be licensed to use the StarSight system and StarSight features of this equipment, you must be registered with StarSight or an authorized representative. Licensed under U.S. Patent numbers 4,706,121 and 5,151,789. Use rights reserved.

StarSight is not in any way liable for the accuracy of the program schedule information provided by the StarSight system. In no event shall StarSight be liable for any amounts representing loss of profits, or indirect, special, or consequential damages in connection with the provision or use of any information, equipment, or service relating to the StarSight system.

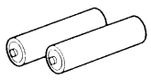
Step 1: Unpacking

Check that you have the following items:

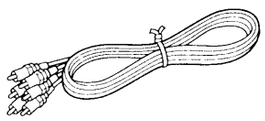
- **Remote commander**



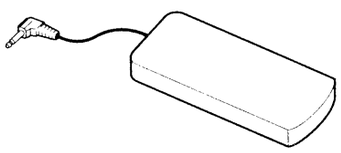
- **Size AA (R6) batteries**



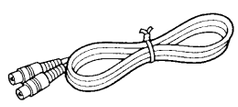
- **Audio/video cable (3-phono to 3-phono)**



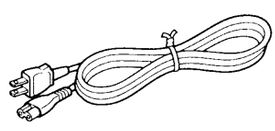
- **Cable Mouse (cable box controller)**



- **75-ohm coaxial cable with F-type connectors**



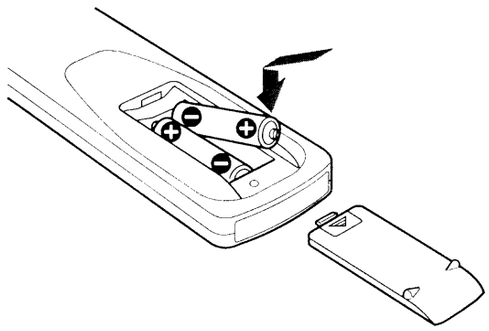
- **AC power cord**



Step 2: Setting up the remote commander

Inserting the batteries

Insert two size AA (R6) batteries matching the + and – on the batteries to the diagram inside the battery compartment.

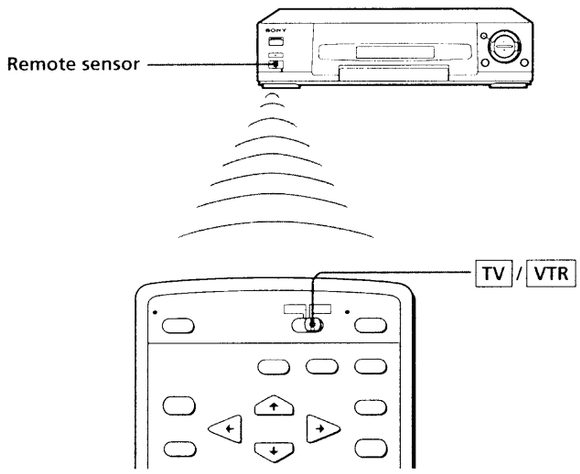


Notes

- With normal use, the batteries should last for approximately three to six months.
- If you do not use the remote commander for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- Do not use a new battery with an old one.
- Do not use different types of batteries.

Using the remote commander

You can use this remote commander to operate this VCR and a Sony TV. Buttons on the remote commander marked with a dot (•) can be used to operate your TV.



To operate	Set TV/VTR to
the VCR	VTR and point at the remote sensor on the VCR
a Sony TV	TV and point at the remote sensor on the TV

Note

- When you use StarSight, you have to set TV/VTR to VTR.

Notes

- Some TVs, even brands listed below, may not be compatible with this remote commander.
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote commander, the code number automatically resets to 1 (Sony). Reset the appropriate code number after you replace the batteries.

Controlling other TVs with the remote commander

The remote commander is preprogrammed to control non-Sony TVs. If your TV is listed in the table below, set the appropriate manufacturer's code number.

1 Set TV/VTR on the top of the remote commander to TV.
2 Press and hold down POWER, and enter your TV's code number(s) using the number buttons. Press the ENTER button. Then release POWER.

Code numbers are listed below.
Now you can use the POWER, VOL +/–, CH +/– and TV/VTR buttons to control your TV. To control the VCR, reset TV/VTR to VTR.

Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

Manufacturer	Code number	Manufacturer	Code number
Sony	1	Philco	3, 4
Akai	4	Philips	8
AOC	4	Pioneer	16
Centurion	12	Portland	3
Coronado	3	Quasar	6, 18
Curis-Mathes	12	Radio Shack	5, 14
Daytron	12	RCA	4, 10
Fisher	11	Sampo	12
General Electric	6, 10	Sanyo	11
Hitachi	2, 3	Scott	12
J.C.Penny	4, 12	Sears	7, 10, 11
JVC	9	Sharp	3, 5, 18
KMC	3	Sylvania	8, 12
Magnavox	3, 8, 12	Teknika	3, 8, 14
Marantz	4, 13	Toshiba	7
MGA/Mitsubishi	4, 12, 13, 17	Wards	3, 4, 12
NEC	4, 12	Yorx	12
Panasonic	6, 19	Zenith	15

Step 3: Hookups

Caution
Connections between the VCR's VHF/UHF connector and the antenna terminals of the TV receiver should be made only as shown in the following instructions. Failure to do so may result in operation that violates the regulations of the Federal Communications Commission regarding the use and operation of RF devices. Never connect the output of the VCR to an antenna or make simultaneous (parallel) antenna and VCR connections at the antenna terminals of your receiver.

Note to CATV system installer
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Notice
Cable service is only available to subscribers of the service. This model tunes in most non-scrambled cable channels directly. Scrambled Cable TV channels will require an external converter. Check with your local cable company on channel compatibility and any additional requirements. Cable Mouse controls channel selection on most cable boxes. Some cable boxes may not be compatible.

Selecting the best hookup option

Before you use your VCR for the first time, you need to connect it to your TV and set it up to receive programs for viewing and recording. This section explains how to hook up and set up your VCR so that you can start enjoying it right away. There are, however, many types of TVs available and many ways in which your TV can be hooked up. For these reasons, this manual describes several ways your VCR can be connected.

To hook up your VCR so that it works best for you, first scan through the table below. Then use the accompanying diagrams and procedures on the following pages to set up your VCR.

If you have	Use	Refer to
TV that has audio/video inputs	Audio/video (A/V) hookup, then follow one of the hookups below.	Page **9**
Cable box that is compatible with the VCR's cable box control feature	Hookup 1	Page **10**
No cable box, with cable TV	Hookup 2	Page **12**
Antenna only, no cable TV	Hookup 3	Page **14**
Incompatible cable box with many scrambled channels	Hookup 4	Page **16**
DSS receiver	Hookup 5	Page **18**

After you've completed the connections, follow the instructions for setup including StarSight setup. During setup, if you need more details on the procedure described, page numbers are provided where you can find complete, step-by-step instructions.

After you've completed the setup, you're ready to use your VCR. Procedures differ depending on the hookup you used. Make a note of which hookup you used so that you can always follow the correct instructions.

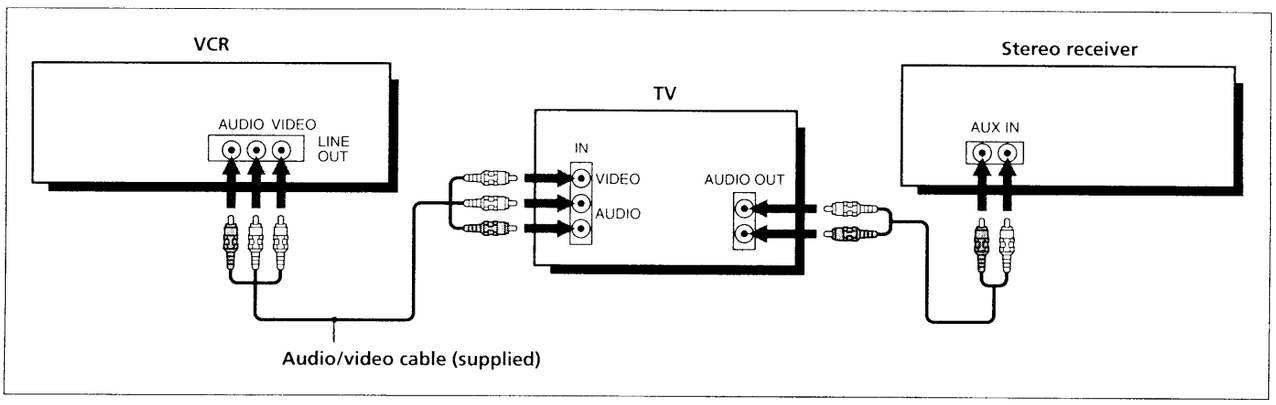
Before you get started
- Turn off the power to all equipment.
- Do not connect the AC power cords until all of the connections are completed.
- Be sure you make connections firmly. Loose connections may cause picture distortion.
- If your TV doesn't match any of the examples provided, see your nearest Sony dealer or qualified technician.

Audio/video (A/V) hookup

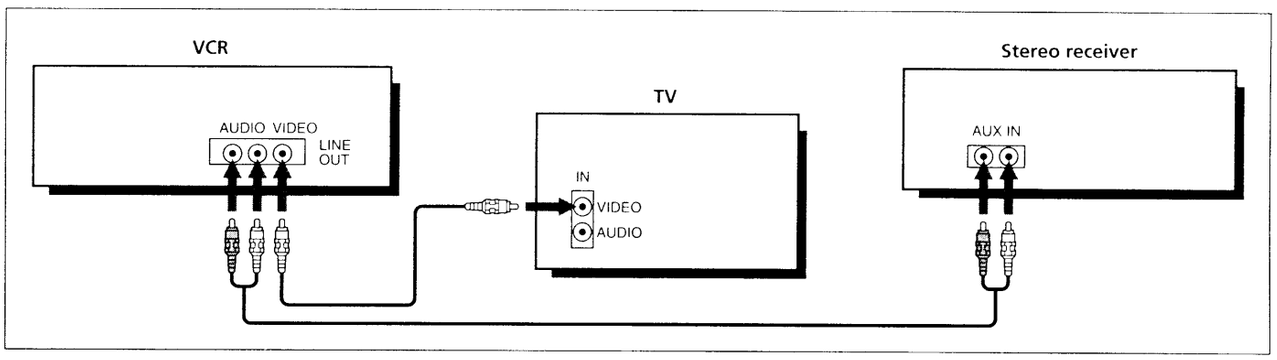
If your TV has audio/video (A/V) input jacks, you will get a better picture and sound if you hook up your VCR using these connections. In addition, for a true "home theater" experience, you should connect the audio outputs of your VCR or TV to your stereo system. If your TV doesn't have A/V inputs, see the following pages for antenna or cable hookups.

If you're planning to use your VCR only to play back pictures and movies, you're finished setting up the VCR after you've made these connections. If you want to record off-air or off your cable TV system, complete these connections first, and then go to the following pages for antenna or cable hookups.

A Use this hookup if your TV has stereo jacks



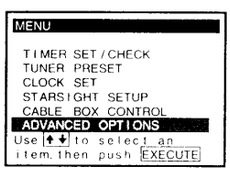
B Use this hookup if your TV doesn't have stereo jacks



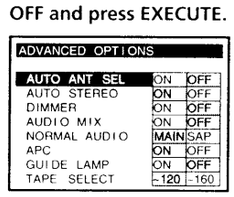
A/V hookup: VCR setup

After you've connected your TV and completed antenna or cable hookup, use the following procedure to set up the VCR.

Press MENU and select ADVANCED OPTIONS.



Set AUTO ANT SEL to OFF and press EXECUTE.



For details, see page 56.

Note

To play a tape in stereo, you must use the A/V connection

Hookup 1

Using cable box control

Recommended use

This hookup is recommended for most cable systems with cable boxes. It allows the VCR's cable box control feature to control the channel on the cable box, simplifying the recording process. You should use this hookup if you have a cable box, especially if your cable system scrambles all or most channels. A list of compatible cable boxes is on page **31.**

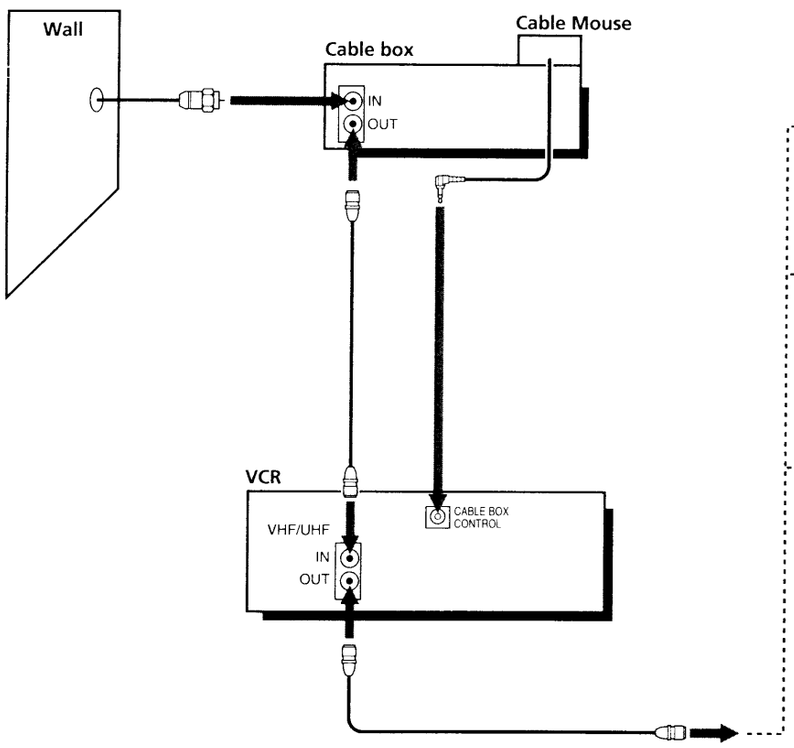
What you can and can't do with this hookup

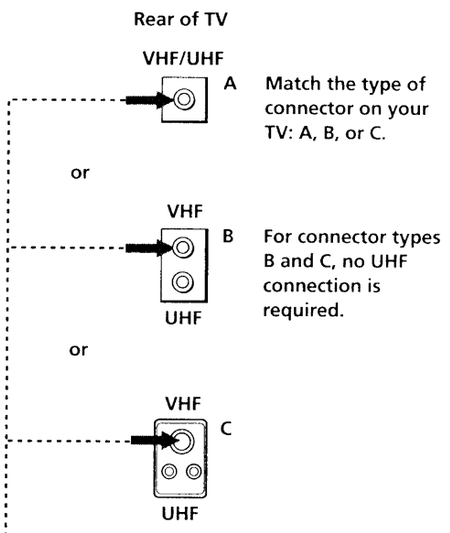
What you can do

- Record any channel using the VCR's cable box control feature to select channels on the cable box

What you can't do

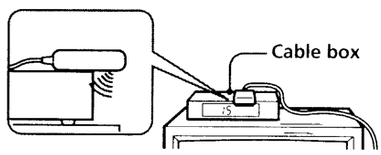
- Record with the cable box turned off
- Record one channel while watching another channel





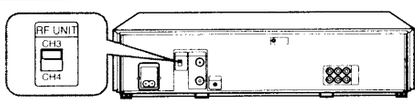
Positioning the Cable Mouse

Position the Cable Mouse on the cable box as shown below. Make sure that the front of the Cable Mouse projects out above the cable box sensor so that signals from the Cable Mouse are transmitted correctly to the cable box. Do not place the cable box on top of the VCR.



Hookup 1: VCR setup

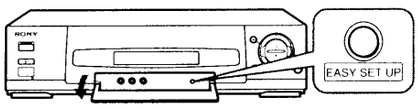
1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel.
If you made A/V connections (from page **9**), you can skip this step.



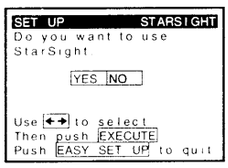
For details, see page 68.

2 Turn on your cable box.

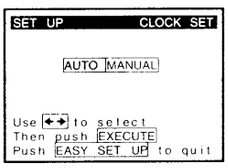
3 Press EASY SET UP on the VCR.
The SET UP menu appears.



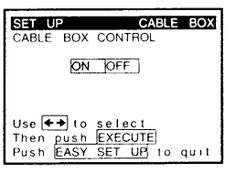
1 Select YES or NO, then press EXECUTE on the remote commander.
If you want to activate StarSight, select YES and follow steps 3–13 on pages 21–23 instead of the steps below.



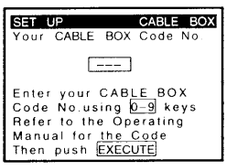
2 The CLOCK SET menu appears. Select AUTO and press EXECUTE.
For details, see page 24.



3 The CABLE BOX CONTROL menu appears. Select ON and press EXECUTE.
For details, see page 30.

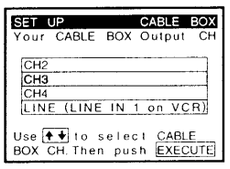


4 Enter your cable box code number and press EXECUTE.
For details, see page 30.

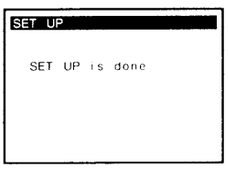

SET UP CABLE BOX
Your CABLE BOX Code No

Enter your CABLE BOX Code No.using 0–9 keys
Refer to the Operating Manual for the Code
Then push EXECUTE

5 Select your cable box output channel and press EXECUTE.
For details, see page 30.



Normal display ←



If your cable box is not compatible, check with your cable company to see if they can provide a compatible cable box. If not, use Hookup 2 (if you have only a few scrambled channels) or Hookup 4 (if you have many scrambled channels).

StarSight setup

Once you activate StarSight, you can see program guides on the TV screen and easily preset the VCR to record programs. A Quick reference to StarSight operations is provided on the back cover to help you quickly enjoy StarSight functions.
StarSight also automatically sets the clock and even adjusts for Daylight Saving Time by picking up a time signal provided by PBS channels. Make sure you leave the cable box on. ***To activate StarSight, see pages 20–23.***

Automatic clock setting

Once you've set up the VCR, it automatically sets the clock and adjusts for Daylight Saving Time the first time you turn **off** the VCR. Make sure you leave the cable box on.
The VCR sets the clock by picking up a time signal provided by some TV channels.
If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages **24–26**.

You are now ready to use your VCR

Procedures differ slightly depending on the hookup used. Make a note of which hookup you used (Hookup 1) so that you can always follow the correct instructions.

Hookup 2

No cable box

Recommended use

Use this hookup if you do not have a cable box.

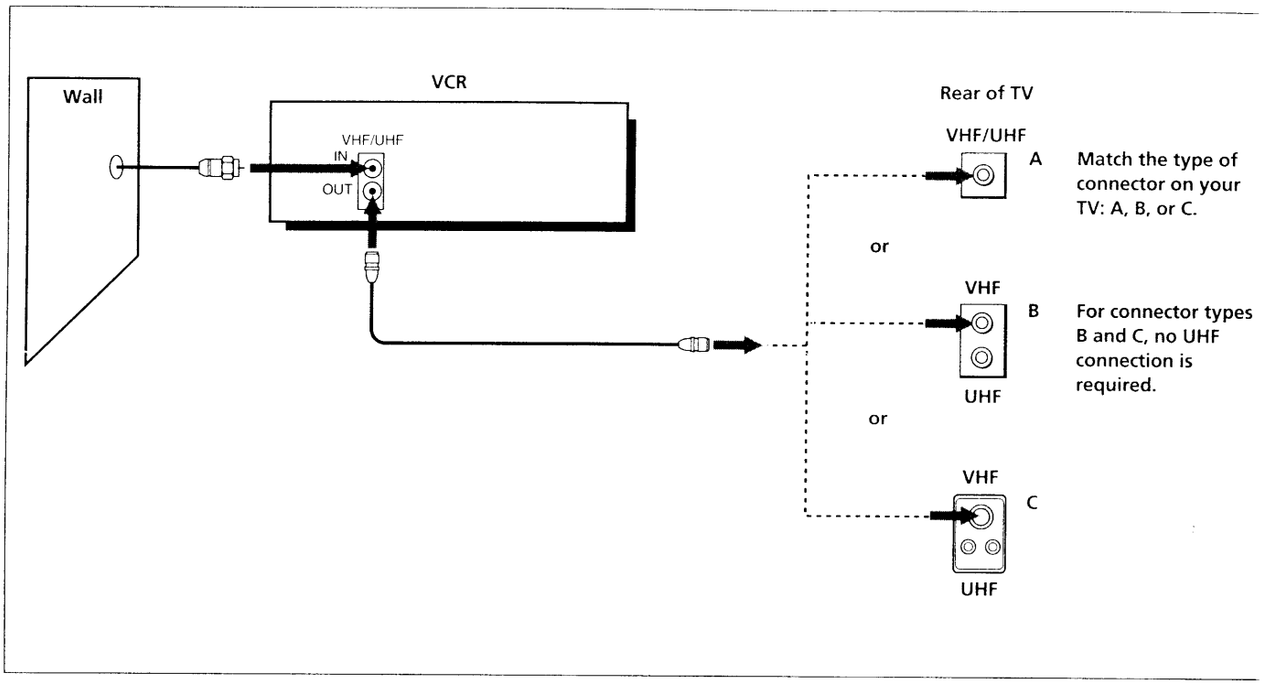
What you can and can't do with this hookup

What you can do

- Record any unscrambled channel by selecting the channel on the VCR

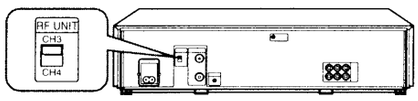
What you can't do

- Record scrambled channels that require a cable box



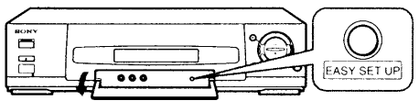
Hookup 2: VCR setup

1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel.
If you made A/V connections (from page **9**), you can skip this step.

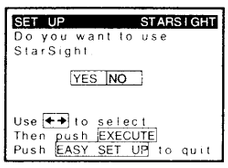


For details, see page 68.

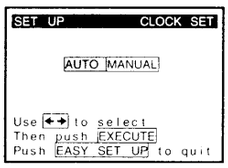
2 Press EASY SET UP on the VCR.
The SET UP menu appears.



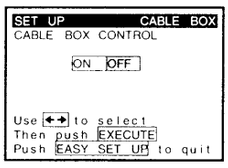
1 Select YES or NO, then press EXECUTE on the remote commander.
If you want to activate StarSight, select YES and follow steps 3–13 on pages 21–23 instead of the steps below.



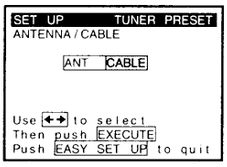
2 The CLOCK SET menu appears. Select AUTO and press EXECUTE.
For details, see page 24.



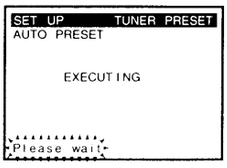
3 The CABLE BOX CONTROL menu appears. Select OFF and press EXECUTE.
For details, see page 30.



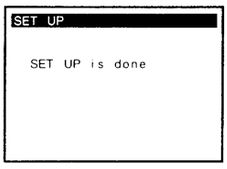
4 The TUNER PRESET menu appears. Set ANTENNA/CABLE to CABLE and press EXECUTE.
For details, see page 27.



5 The AUTO PRESET starts.
For details, see page 27.



Normal display ←



StarSight setup

Once you activate StarSight, you can see program guides on the TV screen and easily preset the VCR to record programs. A Quick reference to StarSight operations is provided on the back cover to help you quickly enjoy StarSight functions.
StarSight also automatically sets the clock and even adjusts for Daylight Saving Time by picking up a time signal provided by PBS channels. ***To activate StarSight, see pages 20–23.***

Automatic clock setting

Once you've set up the VCR, it automatically sets the clock and adjusts for Daylight Saving Time the first time you turn **off** the VCR.
The VCR sets the clock by picking up a time signal provided by some TV channels.
If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages **24–26**.

You are now ready to use your VCR

Procedures differ slightly depending on the hookup used. Make a note of which hookup you used (Hookup 2) so that you can always follow the correct instructions.

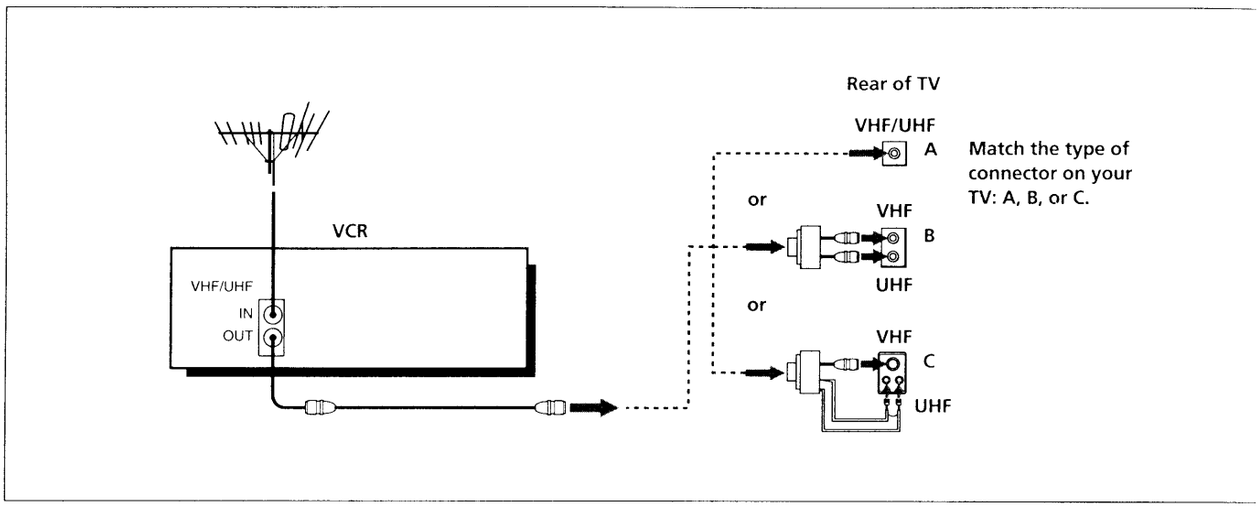
Hookup 3

Make the following connections if you're using an antenna (if you don't have cable TV).

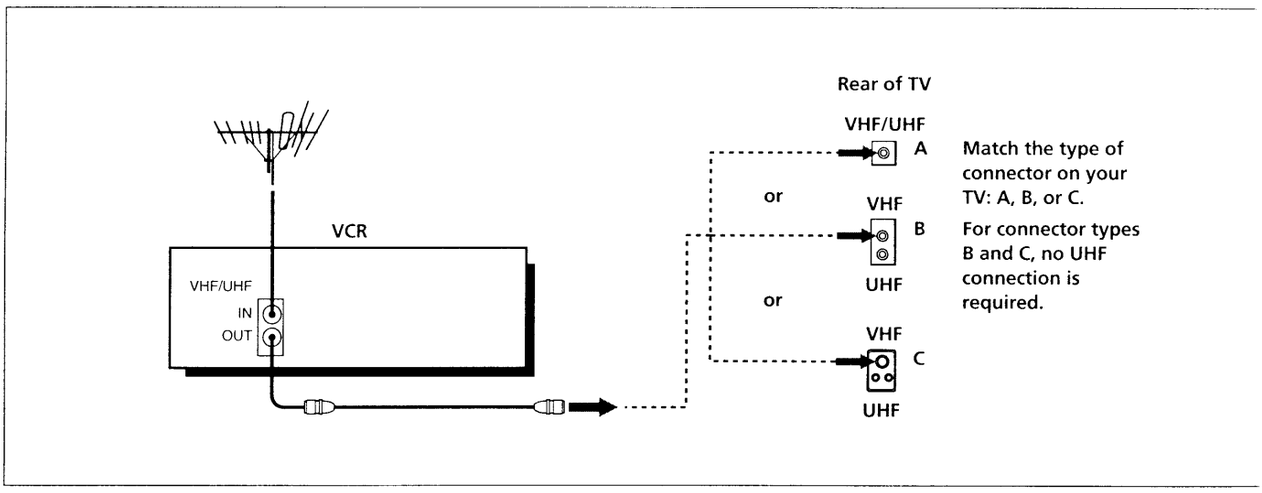
Antenna hookup

A Use this hookup if you're using:

- VHF/UHF antenna (you get channels 2–13 and channels 14 and higher)
- UHF-only antenna (you get channels 14 and higher)
- separate VHF and UHF antennas



B Use this hookup if you're using a VHF-only antenna (you get channels 2–13 only)

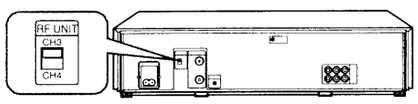


If you cannot connect your antenna cable to the VCR directly

If your antenna cable is a flat cable (300-ohm twin lead cable), attach an external antenna connector (not supplied) so you can connect the cable to the VHF/UHF IN connector. If you have separate cables for VHF and UHF antennas, you may use a U/V band mixer (not supplied). For details, see page **68**.

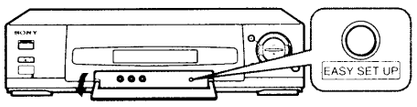
Hookup 3: VCR setup

1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel.
If you made A/V connections (from page **9**), you can skip this step.

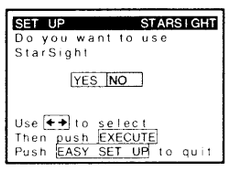


For details, see page 68.

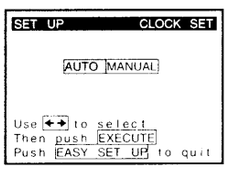
2 Press EASY SET UP on the VCR.
The SET UP menu appears.



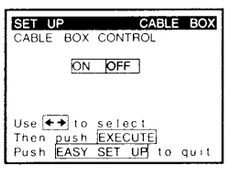
1 Select YES or NO, then press EXECUTE on the remote commander.
If you want to activate StarSight, select YES and follow steps 3–13 on pages 21–23 instead of the steps below.



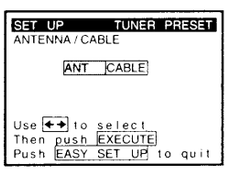
2 The CLOCK SET menu appears. Select AUTO and press EXECUTE.
For details, see page 24.



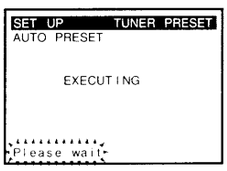
3 The CABLE BOX CONTROL menu appears. Select OFF and press EXECUTE.
For details, see page 30.



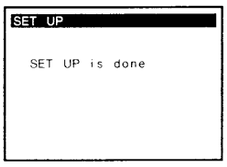
4 The TUNER PRESET menu appears. Set ANTENNA/CABLE to ANT and press EXECUTE.
For details, see page 27.



5 The AUTO PRESET starts.
For details, see page 27.



Normal display ←



StarSight setup

Once you activate StarSight, you can see program guides on the TV screen and easily preset the VCR to record programs. A Quick reference to StarSight operations is provided on the back cover to help you quickly enjoy StarSight functions.
StarSight also automatically sets the clock and even adjusts for Daylight Saving Time by picking up a time signal provided by PBS channels. ***To activate StarSight, see pages 20–23.***

Automatic clock setting

Once you've set up the VCR, it automatically sets the clock and adjusts for Daylight Saving Time the first time you turn **off** the VCR.
The VCR sets the clock by picking up a time signal provided by some TV channels.
If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages **24–26**.

You are now ready to use your VCR

Procedures differ slightly depending on the hookup used. Make a note of which hookup you used (Hookup 3) so that you can always follow the correct instructions.

Hookup 4

Incompatible cable box with many scrambled channels

Recommended use

Use this hookup if your cable company cannot supply a cable box that i compatible with the VCR's cable box control feature, and your cable system scrambles all, or most channels.

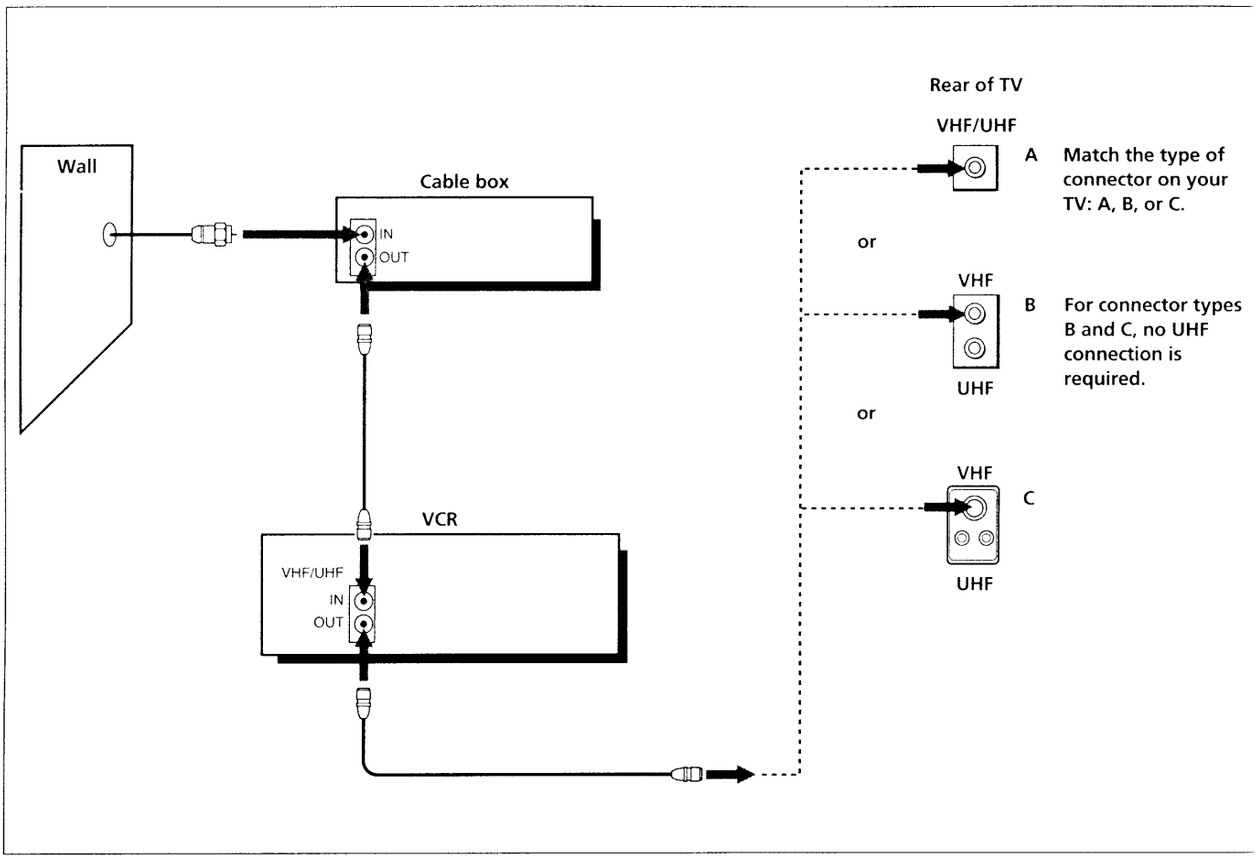
What you can and can't do with this hookup

What you can do

- Record any channel by selecting the channel on the cable box

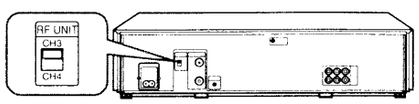
What you can't do

- Record with the cable box turned off
- Record one channel while watching another channel
- Record by selecting channels directly with the VCR
- Use StarSight



Hookup 4: VCR setup

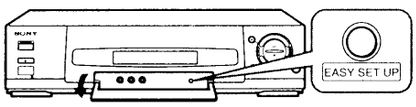
1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel.
If you made A/V connections (from page **9**), you can skip this step.



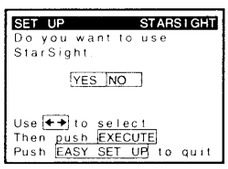
For details, see page 68.

2 Turn on your cable box.

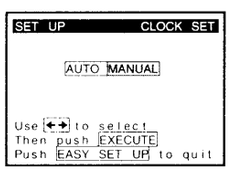
3 Press EASY SET UP on the VCR.
The SET UP menu appears.



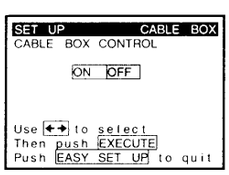
1 Select NO, then press EXECUTE on the remote commander.



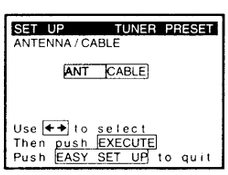
2 The CLOCK SET menu appears. Select MANUAL and press EXECUTE.
For details, see page 26.



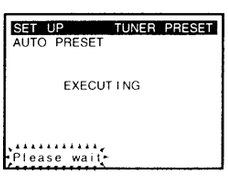
3 The CABLE BOX CONTROL menu appears. Select OFF and press EXECUTE.
For details, see page 30.



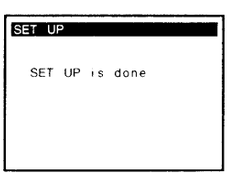
4 The TUNER PRESET menu appears. Set ANTENNA/CABLE to ANT and press EXECUTE.
For details, see page 27.



5 The AUTO PRESET starts.
For details, see page 27.



Normal display ←



StarSight setup

You cannot use StarSight with this hookup. When you want to use StarSight, use hookup 1, 2, or 3.

Automatic clock setting

Since the channels have to be selected manually on the cable box with this hookup, the Auto Clock Set feature will not fully function (page **24**).
If you want to use the Auto Clock Set feature (when available), proceed as follows:

1 Tune the cable box to a channel that carries a time signal.
2 Leave the cable box on.
3 Turn on the Auto Clock Set feature.
4 Turn off the VCR.

You are now ready to use your VCR

Procedures differ slightly depending on the hookup used. Make a note of which hookup you used (Hookup 4) so that you can always follow the correct instructions.

Hookup 5

DSS (Digital Satellite System) receiver

Recommended use

Use this hookup if you have a DSS receiver. It allows the VCR's cable box control feature to control the channel on the DSS receiver, simplifying the recording process. You should use this hookup if you have a DSS receiver. A list of compatible DSS receivers is on page **31**.

DSS (Digital Satellite System) is a satellite broadcast that provides superior digital-quality video and crisp digital-quality audio. A variety of program packages are available through your program providers. It also has program guides that are sorted by program categories.

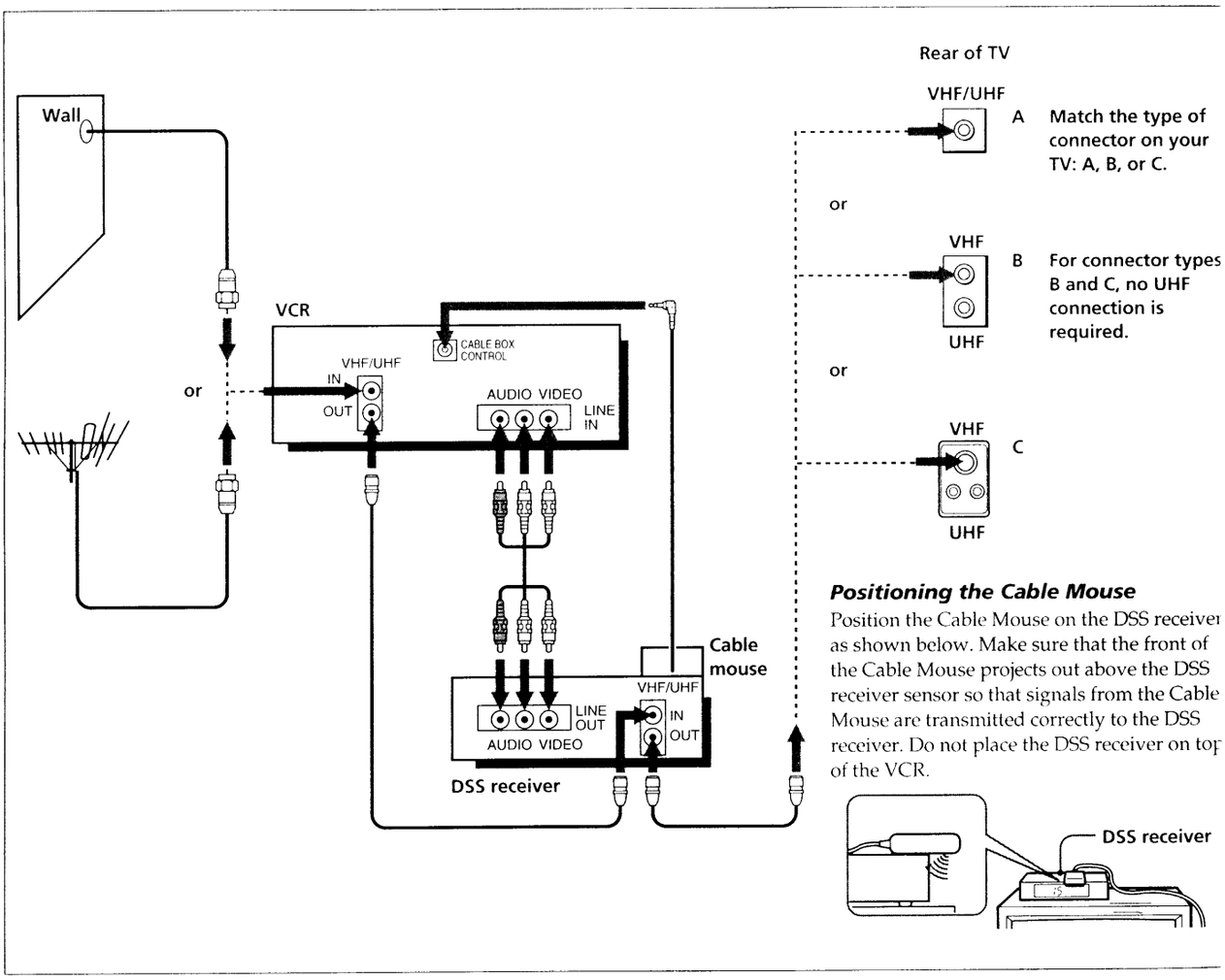
What you can and can't do with this hookup

What you can do

- Record any channels using the VCR's cable box control feature to select channels on the DSS receiver

What you can't do

- Record any channels from cable or an antenna
  (To record channels from cable or an antenna, turn off the cable box control feature.)
- Use a cable box
- Use StarSight

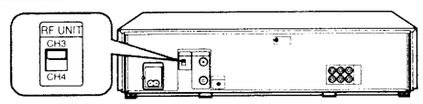


Positioning the Cable Mouse

Position the Cable Mouse on the DSS receiver as shown below. Make sure that the front of the Cable Mouse projects out above the DSS receiver sensor so that signals from the Cable Mouse are transmitted correctly to the DSS receiver. Do not place the DSS receiver on top of the VCR.

Hookup 5: VCR setup

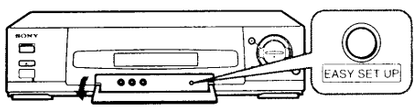
1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel.
If you made A/V connections (from page **9**), you can skip this step.



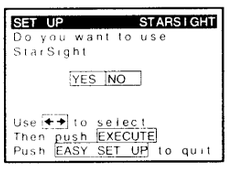
For details, see page 68.

2 Turn on your DSS receiver.

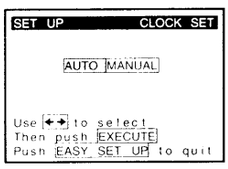
3 Press EASY SET UP on the VCR.
The SET UP menu appears.



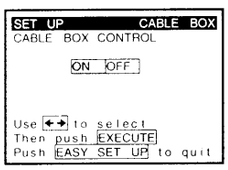
1 Select NO, then press EXECUTE on the remote commander.



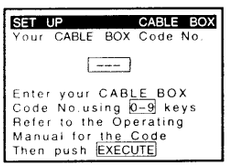
2 The CLOCK SET menu appears. Select AUTO and press EXECUTE.
For details, see page 24.



3 The CABLE BOX CONTROL menu appears. Select ON and press EXECUTE.
For details, see page 30.

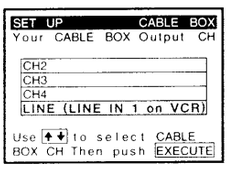


4 Enter your DSS receiver code number and press EXECUTE.
For details, see page 30.

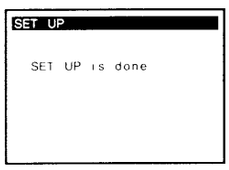

SET UP CABLE BOX
Your CABLE BOX Code No.

Enter your CABLE BOX Code No.using 0-9 keys
Refer to the Operating Manual for the Code
Then push EXECUTE

5 Select LINE (LINE IN 1 on VCR) and press EXECUTE.
For details, see page 30.



Normal display ←



StarSight setup

You cannot use StarSight with this hookup. When you want to use StarSight, use hookup 1, 2, or 3.
If using hookup 1, 2, or 3, to receive and record from DSS, connect the line output jacks of the DSS receiver to the LINE IN jacks of this VCR. Then display addressed input "L1" or "L2" in the display window.

Automatic clock setting

If you connect an antenna or cable to the VCR, the Auto Clock Set feature will function. It automatically sets the clock and adjusts for Daylight Saving Time the first time you turn **off** the VCR.
The VCR sets the clock by picking up a time signal provided by some TV channels.
If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages **24–26**.

You are now ready to use your VCR

Procedures differ slightly depending on the hookup used. Make a note of which hookup you used (Hookup 5) so that you can always follow the correct instructions.

Notes

- To successfully record a program from DSS, proceed as follows:
  - Leave the DSS receiver on all the time.
  - Turn off the display (menu screen, channel number, etc.) of the DSS receiver.
  - To record or receive locked channels, unlock the channel before the VCR starts recording.
  - To set pay-per-view programs in the timer setting, order the pay-per-view program before the VCR starts recording.
- Some programs are copy protected. You cannot record these programs.

StarSight installation

This VCR is equipped with StarSight, the seven-day on screen television guide with one-button VCR recording. For a quick StarSight demonstration, follow the steps on page **64**.
You need to activate StarSight to receive its program information. To try StarSight FREE for 30 days, simply follow the steps on the next few pages, then call 1-800-643-STAR.

Checking your PBS (Public Broadcasting Service) channel and cable box

StarSight uses an unseen portion of your local PBS station's signal to transmit data. Therefore, during the on-screen StarSight activation process, you need to let StarSight know the PBS channel in your area and the type of cable box (if any) you have installed. Find the PBS channel number in your area from the chart on pages **65** to **67** and your cable box code numbers from the chart on page **31**. To make your activation easy, write down these numbers in the spaces provided below.

StarSight Checklist

If more than one number is listed, write down all the numbers.

PBS station letters: _____

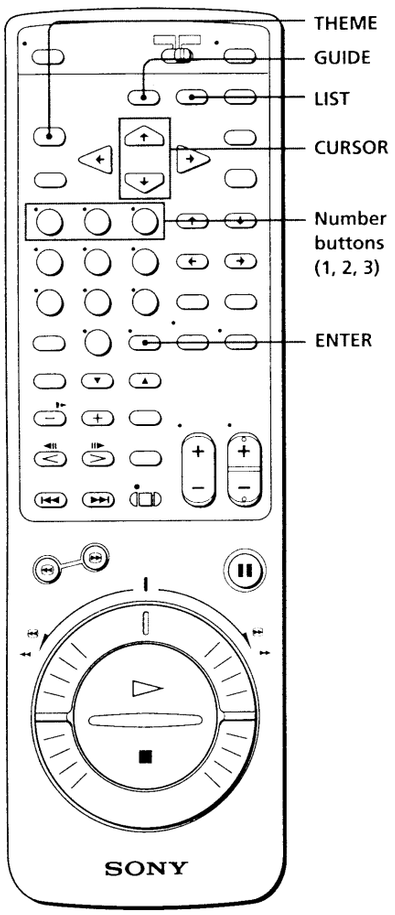
PBS station channel number: _____

PBS station cable channel number: _____
(If you have cable TV, you should tune to this channel number during the setup process.)

Cable box code numbers: _____

Activating StarSight

You need to activate StarSight to receive program information. Once you activate StarSight, you do not need to set the clock, the cable box control, or the channels since StarSight does all these settings for you. When you set up your VCR for the first time, you can activate StarSight using the EASY SET UP button. You can also activate StarSight using the on-screen menu.



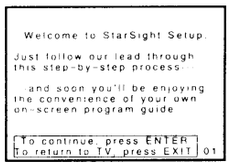
Before you start...

- Hookup your VCR correctly.
- Complete the StarSight Checklist on page **20**.
- Turn on your VCR and TV.
  If using a cable box, turn it on.
- Set your TV to the VCR channel (channel 3 or 4). If your TV is connected to the VCR using A/V connections, set the TV to video input.
- Tune your VCR to the PBS channel in your area.
- Have a telephone near you so that you can call StarSight's toll-free activation number while viewing the TV screen.

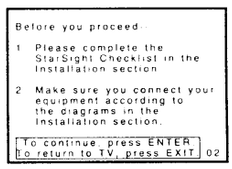
1 **Press GUIDE, LIST or THEME.**
The StarSight menu appears on the TV screen.

Welcome to StarSight
Your VCR is equipped with StarSight, the seven-day, on-screen television guide with one-button VCR recording.
Activate StarSight
Quick StarSight Demo
Continuous Retail Demo
Use ARROWS then ENTER to choose
To return to TV, press EXIT

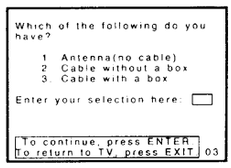
2 **Press the CURSOR (↑/↓) buttons to select Activate StarSight, then press ENTER.**
The StarSight setup screen appears.


Welcome to StarSight Setup.
Just follow our lead through this step-by-step process...
...and soon you'll be enjoying the convenience of your own on-screen program guide.
To continue, press ENTER
To return to TV, press EXIT
01

3 **Press ENTER.**
The following reminder screen appears. To connect your equipment, see "Hookups" on pages **8** – **19**.

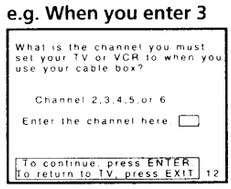

Before you proceed...
1 Please complete the StarSight Checklist in the Installation section.
2 Make sure you connect your equipment according to the diagrams in the Installation section.
To continue, press ENTER
To return to TV, press EXIT
02

4 **When you have completed the pre-registration procedure, press ENTER.**
The equipment selection screen appears.


Which of the following do you have?
1 Antenna(no cable)
2 Cable without a box
3 Cable with a box
Enter your selection here:
To continue, press ENTER
To return to TV, press EXIT
03

5 **Press the number buttons 1, 2, or 3 according to the equipment you have, then press ENTER.**
When you enter 3, the following screen appears.
Select the output channel for your cable box.

e.g. When you enter 3


What is the channel you must set your TV or VCR to when you use your cable box?
Channel 2, 3, 4, 5, or 6
Enter the channel here:
To continue, press ENTER
To return to TV, press EXIT
12

Note

- StarSight works with almost all current cable boxes that can be operated by wireless remote commander. For cable boxes purchased after 1994, call StarSight for compatibility information.

Tips

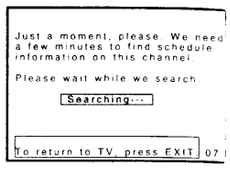
- To exit from StarSight setup, press EXIT while activating.
- StarSight uses an unseen portion of your local PBS station's signal to transmit data. This data contains information for all available channels, not just PBS.

(continued)

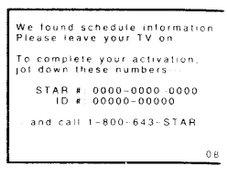
StarSight installation (continued)

6 **Press ENTER.**

If you have not tuned to the closest PBS channel in your area, do so now, then press ENTER.
The following screen appears and StarSight starts searching for schedule information.


Just a moment, please. We need a few minutes to find schedule information on this channel.
Please wait while we search.
Searching...
To return to TV, press EXIT
07

If you have successfully tuned to a channel on which StarSight sends data, the following screen appears.



7 **Write down the STAR # and ID # displayed on your TV screen.**

STAR #: _____

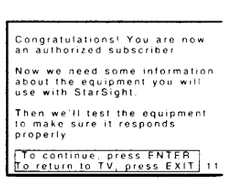
ID #: _____

8 **To activate StarSight, call 1-800-643-STAR.**

Have the following information on hand before you call the Customer Service Representative.

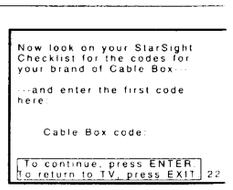
- Type of system: antenna or cable
- If cable, name of your cable company
- STAR #
- ID #
- Your name, address, phone number
- Time zone/daylight savings
- Payment information (e.g. credit card number)

When your account is set up, the following screen appears.
If you don't have a cable box, you are now an authorized subscriber.


Congratulations! You are now an authorized subscriber.
Now we need some information about the equipment you will use with StarSight.
Then we'll test the equipment to make sure it responds properly.
To continue, press ENTER.
To return to TV, press EXIT.
11

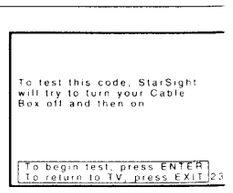
9 **If you have a cable box with your StarSight system, press ENTER.**

The following screen appears.


Now look on your StarSight Checklist for the codes for your brand of Cable Box...
...and enter the first code here.
Cable Box code:
To continue, press ENTER.
To return to TV, press EXIT.
22

10 **Enter your cable box code number on the StarSight Checklist on page 20 using the number buttons, then press ENTER.**

The following screen appears.

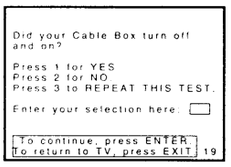

To test this code, StarSight will try to turn your Cable Box off and then on.
To begin test, press ENTER.
To return to TV, press EXIT.
23

Note

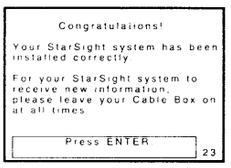
- If there is more than one code number for your cable box, try entering them one by one until you come to the correct code.

11 **Press ENTER to start the test.**
The following screen appears.

StarSight tries to turn the cable box off and on, then the following screen appears.


Did your Cable Box turn off and on?
Press 1 for YES
Press 2 for NO
Press 3 to REPEAT THIS TEST.
Enter your selection here:
To continue, press ENTER
To return to TV, press EXIT
19

12 **Press 1, 2, or 3 using the number buttons, then press ENTER.**
If you press 1, the following screen appears indicating that you have installed the system correctly.
If the cable box does not turn off, continue testing by following the on-screen messages until you have found the correct code.

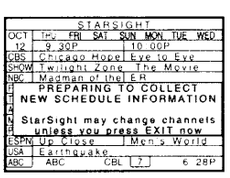

Congratulations!
Your StarSight system has been installed correctly.
For your StarSight system to receive new information, please leave your Cable Box on at all times.
Press ENTER
23

13 **Press ENTER.**

Tip
- You can change the scheduled data reception time to receive StarSight data. See page **63**.

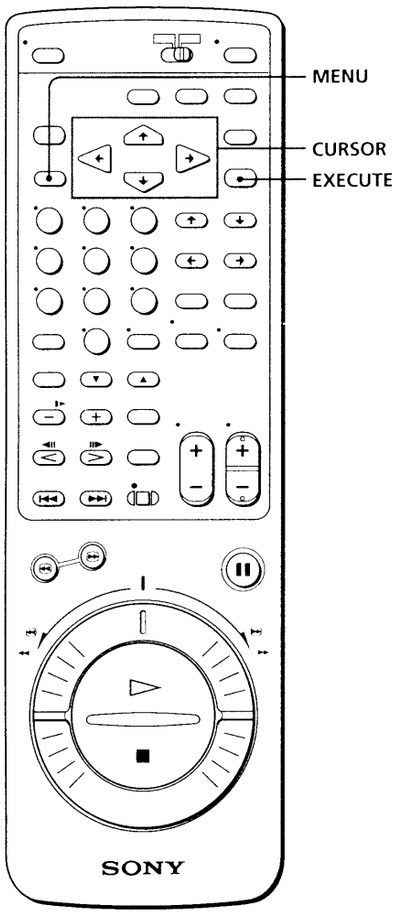
After you activate StarSight

Your system starts receiving StarSight data when the VCR is tuned to the appropriate PBS channel, or during the scheduled data reception time (the initial setting is 2:00 A.M. to 8:00 A.M.). If the VCR is turned on, StarSight will display a pop-up like follows.


STARSIGHT
OCT 12 THU 9 30P FRI SAT SUN MON TUE WED 10 00P
CBS Chicago Hope Eye to Eye
SHOW Twilight Zone The Movie
NBC Madman of the E.H.
PREPARING TO COLLECT
NEW SCHEDULE INFORMATION
StarSight may change channels
unless you press EXIT now
ESPN Up Close Men's World
USA Earthquake
ABC ABC CBL 7 6 28P

If you press EXIT, the VCR will try to collect StarSight data two hours later (i.e. It tries to collect data every two hours during the six hour scheduled data reception period.) If you don't press EXIT, StarSight automatically tunes the VCR to the appropriate PBS channel and starts receiving StarSight data. (If you use a cable box, you have to leave the cable box turned on.) In most cases, it takes from four to six hours for StarSight to initially download information for a full week of programs; in some instances, it may take overnight. After that, your system will be automatically updated with the latest information.

Installation without StarSight



Notes

- The clock cannot be set automatically if you don't receive a channel that carries a time signal in your area. If so, set the clock manually (page **26**).
- If there are only a few channels in your area that carry time signals and they are on high channel numbers, setting the clock automatically the first time may take up to about 30 minutes. If nothing happens even after you wait about 30 minutes, select a PBS station in your area in the CLOCK SET CHANNEL menu, or set the clock manually.
- The menu disappears automatically if you don't proceed for more than one minute.
- If you use Hookup 1 or 4, make sure to leave the cable box on.

If you don't activate StarSight, set the clock and the cable box control and preset the channels.
When you set up your VCR for the first time, you can set these items using the EASY SET UP button (pages **11**, **13**, **15**, **17**, and **19**). You ca also set them using the menu.

Setting the clock

Set the time and date to use the timer feature for recording programs

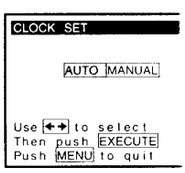
To use the Auto Clock Set feature

Most PBS (Public Broadcasting Service) channels transmit time signa with their broadcasts. Your VCR can pick up this time signal to automatically set the clock. After completing the steps below, when turn off the VCR, the VCR checks whether the clock displays the cur time or not. If not, it will automatically search for a channel that carr a time signal, and set the clock and Daylight Saving Time. The Auto Clock Set feature only works if a channel in your area is broadcastin time signal. If broadcasters in your area are not yet sending time sig set the time manually (page **26**).

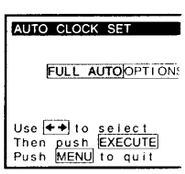
Before you start...

- Turn on your VCR and TV.
  If using a cable box, turn it on.
- Set the TV to the VCR channel (channel 3 or 4). If your TV is connected to the VCR using A/V connections, set the TV to video input.
- Press TV/VTR to display the VCR indicator in the VCR's display window.

1 Press MENU and select CLOCK SET.



2 Select AUTO using the CURSOR (←/→) buttons, then press EXECUTE.

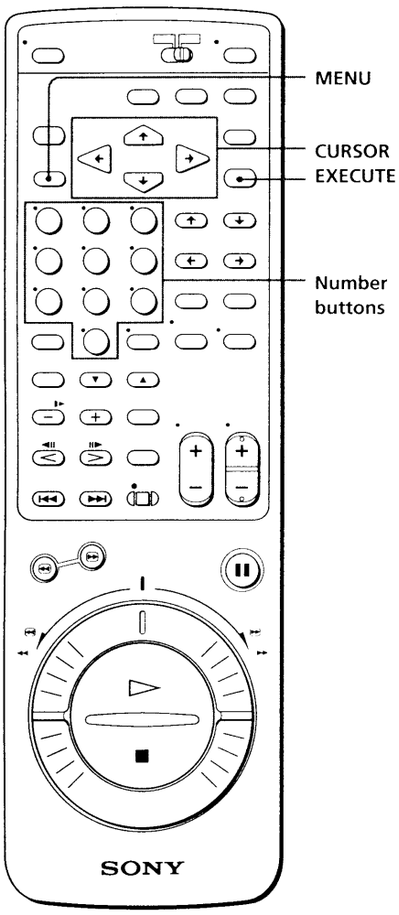


3 Select FULL AUTO using the CURSOR (←/→) buttons, then press EXECUTE.

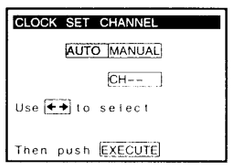
4 To activate the Auto Clock Set function, turn off the VCR.
The VCR automatically sets the clock by searching for a channel that carries a time signal and sets your time zone and daylight saving time (if applicable).
If your clock sets, but displays the wrong time zone or daylight saving time, you can adjust these settings without turning off the Auto Clock Set feature (page **25**).

Select Auto Clock TV station manually

1 Follow steps **1** to **2** in "To use the Auto Clock Set feature" on page **24**.

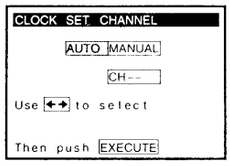


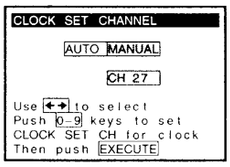
2 Select OPTIONS in the AUTO CLOCK SET menu using the CURSOR (←/→) buttons, then press EXECUTE.



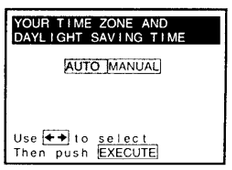
3 Select AUTO or MANUAL using the CURSOR (←/→) buttons.

- If you select AUTO:
  The VCR automatically searches for a channel that carries a time signal.
- If you select MANUAL:
  Select a channel that carries a time signal using the number buttons.
  Use this option if you know of a channel that carries a time signal.
  Most PBS member stations broadcast a time signal.
  For the fastest response, select your local PBS station. (See pages **65** to **67**.)



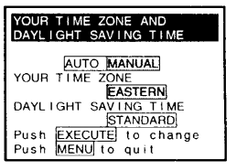


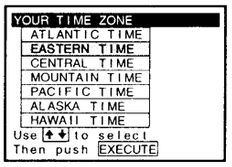
4 Press EXECUTE.

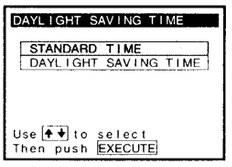


5 Select AUTO or MANUAL using the CURSOR (←/→) buttons.

- If you select AUTO:
  The VCR automatically sets your time zone and daylight saving time (if applicable).
- If you select MANUAL:
  (1) Press EXECUTE, then set the time zone of your area using the CURSOR (↑/↓) buttons.
  (2) Press EXECUTE, then select STANDARD TIME or DAYLIGHT SAVING TIME using the CURSOR (↑/↓) buttons.







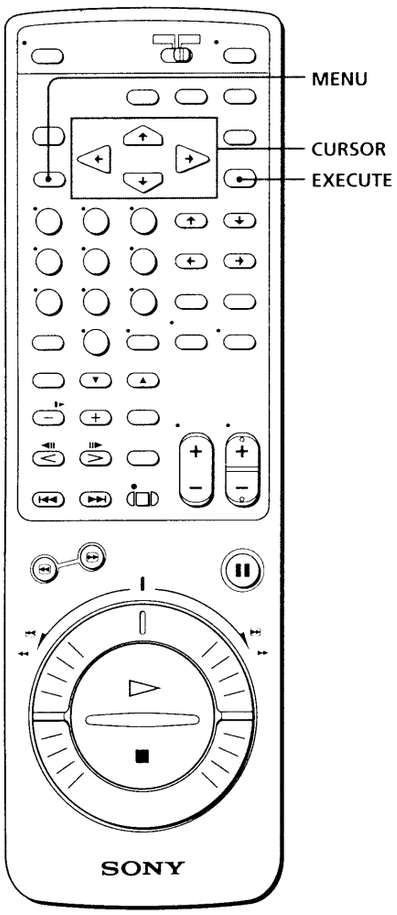
6 Press EXECUTE.

7 To activate the Auto Clock Set function, turn off the VCR.

Notes

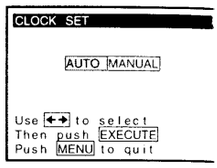
- If you use both the cable box control feature and the Auto Clock Set feature, the VCR automatically changes channels on the cable box until a channel that carries a time signal is found, whenever you turn off the VCR.
- If you want to stop the search, change the channel on the cable box with the channel buttons either on the VCR or on the remote commander.
- If you don't receive a channel that carries a time signal in your area, using the Manual Clock Set stops the automatic channel search. If the Auto Clock Set feature is not in use, the channel search is not performed.

Installation without StarSight (continued)

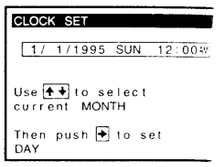


To use the Manual Clock Set

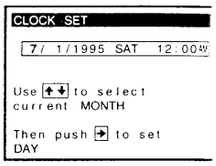
1 Press MENU and select CLOCK SET.



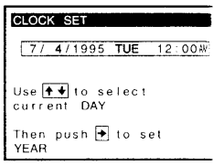
2 Select MANUAL using the CURSOR (←/→) buttons, then press EXECUTE.



3 Set the month using the CURSOR (↑/↓) buttons.



4 Press CURSOR → to highlight the day and set the day using the CURSOR (↑/↓) buttons.
The day of the week is set automatically.

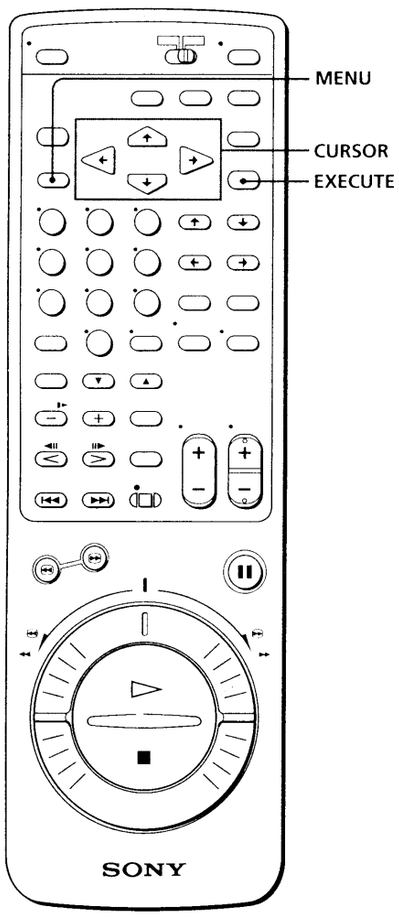


5 Set the year, hour, and minutes in sequence using CURSOR → to highlight the item to be set, and the CURSOR (↑/↓) buttons to select the digits.

6 Press EXECUTE to start the clock.

Presetting channels

(Skip this section if you are using cable box control.)



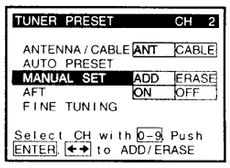
This VCR is capable of receiving VHF channels 2 to 13, UHF channels 14 to 69 and unscrambled CATV channels 1 to 125. First, we recommend that you preset the receivable channels in your area using automatic presetting. Then, if there are any unwanted channels, disable them manually. If you have decided which channels you wish to preset, set them directly using manual presetting.

Before you start...

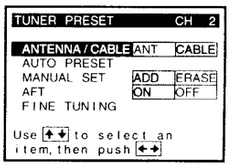
- Turn on your TV and tune in to the VCR.
  If using a cable box, turn it on.
- Press POWER to turn on the VCR.
- Press TV/VTR to display the VTR indicator in the VCR's display window.
- Press INPUT SELECT so that a channel number appears in the VCR's display window.

To preset all receivable channels automatically

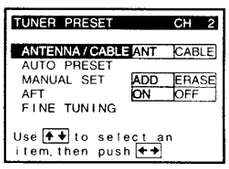
1 Press MENU and select TUNER PRESET.


TUNER PRESET CH 2
ANTENNA / CABLE ANT CABLE
AUTO PRESET
MANUAL SET ADD ERASE
AFT ON OFF
FINE TUNING
Select CH with 0-9. Push ENTER. ↔ to ADD/ERASE

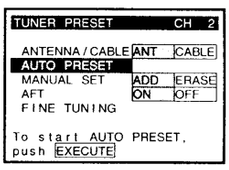
2 • To preset cable TV channels:
Set ANTENNA/CABLE to CABLE using the CURSOR (←/→) buttons.


TUNER PRESET CH 2
ANTENNA / CABLE ANT CABLE
AUTO PRESET
MANUAL SET ADD ERASE
AFT ON OFF
FINE TUNING
Use ↕ to select an item, then push ↔

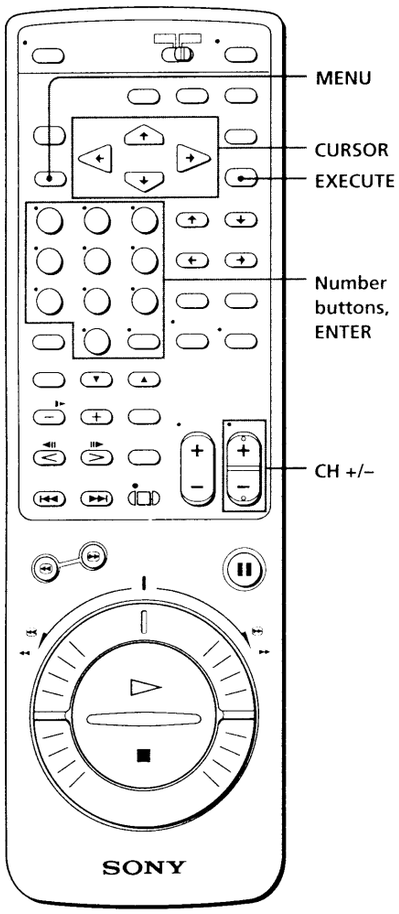
• To preset VHF and UHF channels:
Set ANTENNA/CABLE to ANT using the CURSOR (←/→) buttons.


TUNER PRESET CH 2
ANTENNA / CABLE ANT CABLE
AUTO PRESET
MANUAL SET ADD ERASE
AFT ON OFF
FINE TUNING
Use ↕ to select an item, then push ↔

3 Select AUTO PRESET using the CURSOR (↑/↓) buttons, then press EXECUTE.
All receivable channels are preset in numerical sequence. When no more receivable channels can be found, presetting stops and the picture from the lowest numbered channel is displayed on the TV screen.

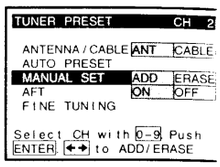


Installation without StarSight (continued)

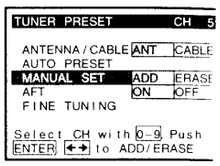


To preset/disable channels manually

1 Press MENU and select TUNER PRESET.

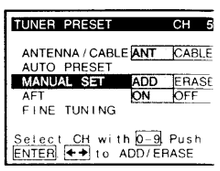

TUNER PRESET CH 2
ANTENNA / CABLE ANT CABLE
AUTO PRESET
MANUAL SET ADD ERASE
AFT ON OFF
FINE TUNING
Select CH with 0-9, Push ENTER ↔ to ADD/ERASE

2 • To preset a channel:
Enter the channel number by pressing the number buttons then ENTER.

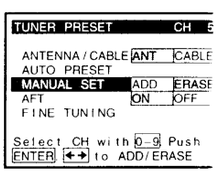

TUNER PRESET CH 5
ANTENNA / CABLE ANT CABLE
AUTO PRESET
MANUAL SET ADD ERASE
AFT ON OFF
FINE TUNING
Select CH with 0-9, Push ENTER ↔ to ADD/ERASE

• To disable a channel:
Select the channel number by pressing CH +/–.

3 • To preset a channel:
Set MANUAL SET to ADD using the CURSOR (←/→) buttons.


TUNER PRESET CH 5
ANTENNA / CABLE ANT CABLE
AUTO PRESET
MANUAL SET ADD ERASE
AFT ON OFF
FINE TUNING
Select CH with 0-9, Push ENTER ↔ to ADD/ERASE

• To disable a channel:
Set MANUAL SET to ERASE using the CURSOR (←/→) buttons.


TUNER PRESET CH 5
ANTENNA / CABLE ANT CABLE
AUTO PRESET
MANUAL SET ADD ERASE
AFT ON OFF
FINE TUNING
Select CH with 0-9, Push ENTER ↔ to ADD/ERASE

4 Repeat steps **2** and **3** to preset or disable channels as required, then press EXECUTE.

Cable TV channel assignment

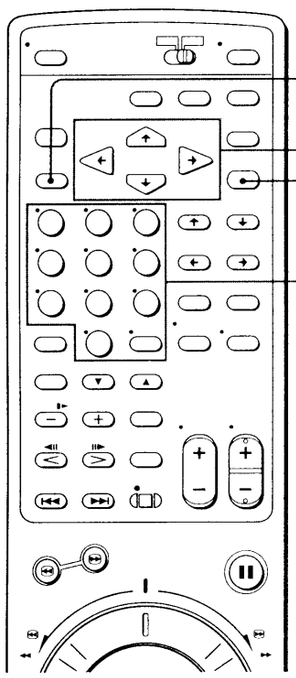
Cable TV systems use letters or numerals to designate channels. This VCR is designed to correspond with standard cable systems. The chart below shows the channel numbers on this VCR and the corresponding cable TV channels. Note that the channel number assignment shown in the chart may not correspond to the channel number used by your local cable company. Check with your local cable TV company for more information on the available channels.

Number on this VCR	*1*	*2*	*3*	...	*12*	*13*	*14*	*15*	*16*	*17*
Cable TV channel	A-8	2	3	...	12	13	A	B	C	D

18	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*
E	F	G	H	I	J	K	L	M	N	O	P	Q	R

32	*33*	*34*	*35*	*36*	*37*	*38*	...	*93*	*94*	*95*	*96*	*97*	*98*
S	T	U	V	W	W+1	W+2	...	W+57	W+58	A-5	A-4	A-3	A-2

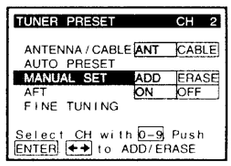
99	*100*	*101*	...	*124*	*125*
A-1	W+59	W+60	...	W+83	W+84



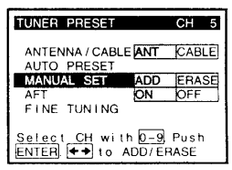
If the picture is not clear

Normally, the Auto Fine Tuning (AFT) function automatically tunes in channels clearly. If, however, the picture of a channel is not clear, you may also use the manual tuning function.

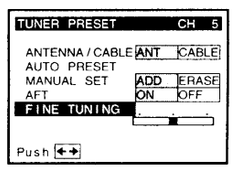
1 Press MENU and select TUNER PRESET.



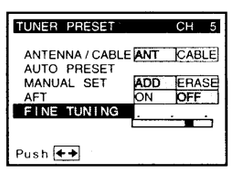
2 Select the channel you want to fine-tune by pressing the number buttons, then ENTER.



3 Select FINE TUNING using the CURSOR (↑/↓) buttons.
The fine tuning meter appears.

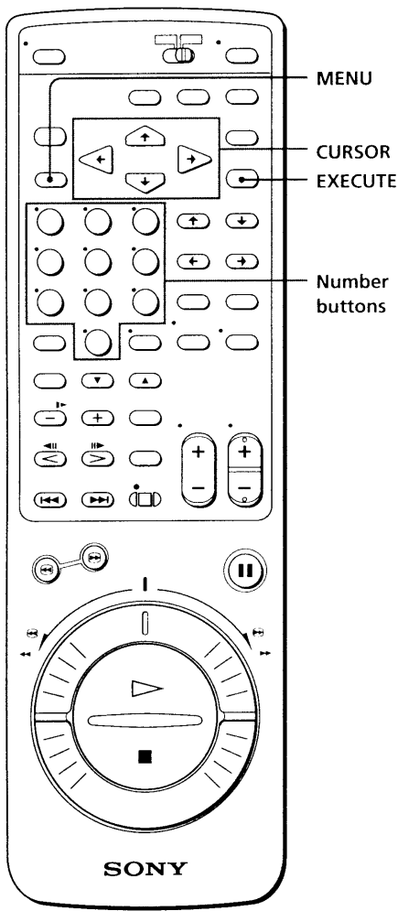


4 Adjust the picture using the CURSOR (←/→) buttons to get a clearer picture. Note that the AFT setting switches to OFF.



Note

- If you activate StarSight, only AFT and FINE TUNING items appear in the TUNER PRESET menu since any other items in the TUNER PRESET menu are controlled under the StarSight system.



Setting up cable box control

(Skip this section if you are using Hookup 2, 3 or 4.)

Your VCR includes a cable box control feature which allows the VCR to control most brands of cable boxes/DSS receivers via the Cable Mouse. With cable box control, the VCR controls channels on the cable box/DSS receiver for timer recording. You can also use the VCR's remote commander to change channels on the cable box/DSS receiver whenever the cable box/DSS receiver is turned on even if the VCR is turned off. To use cable box control, you need to connect the Cable Mouse (page **10** and **18**) and set the code number and output channel.

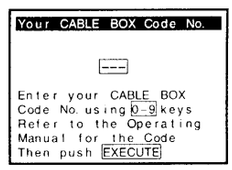
This VCR is programmed with codes necessary to control channel selection on most brands of cable boxes at the time this VCR was manufactured. It is possible that new cable boxes may be introduced that cannot be controlled with this VCR's Cable Mouse. If you have a cable box that is incompatible with this VCR, contact your cable operator — they may be able to provide you with a compatible cable box.

Before you start...

- Turn on your TV and tune in to the VCR.
- Turn on your cable box/DSS receiver.
- Press POWER to turn on the VCR.

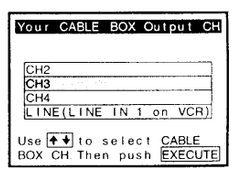
1 Press MENU and select CABLE BOX CONTROL.

2 Select ON using the CURSOR (←/→) buttons, then press EXECUTE.

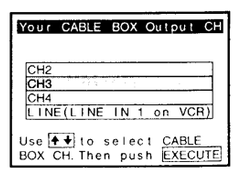

Your CABLE BOX Code No.

Enter your CABLE BOX Code No. using 0-9 keys
Refer to the Operating Manual for the Code
Then push EXECUTE

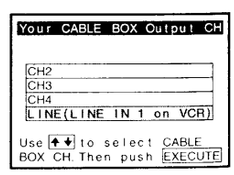
3 Enter the cable box/DSS receiver code number by pressing the number buttons, then press EXECUTE.
Find your cable box/DSS receiver code number from the chart on the following page.



4 • If you want to control a cable box, select the output channel for the cable box using the CURSOR (↑/↓) buttons.



• If you want to control a DSS receiver, select LINE (LINE IN 1 on VCR) using the CURSOR (↑/↓) buttons.



5 Press EXECUTE.

Cable box brands and the corresponding cable box code numbers

If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.

Cable box brand	Code numbers
ABC	001, 003, 007, 011, 013, 014, 017, 047, 206
Antronix	022, 207
Archer	022, 039, 153, 207
BBT	267
British Telecom	105
Cable Star	056
Cabletenna	022
Cabletime	161, 271, 377, 448
Century	153
Citizen	153, 315, 316
Clyde Cablevision	086
Colour Voice	025, 031
Comband	232, 233
Comtronics	040, 060
Decsat	423
Diamond	035
Eagle Comtronics	040
Eastern	002, 274
Electricord	078
Electus	044
Filmnet	443
Focus	400
Garrard	153
GC Electronics	016, 056, 207, 330
GE	232, 233
GEC	086
Gemini	015, 057, 070, 242
General Instrument	011, 476
Hamlin	009, 020, 034, 259, 273
Hitachi	011, 154
Jasco	153, 315, 316
Jerrold	003, 011, 012, 014, 015, 024, 026, 047, 098, 276, 476
Linsay	440
Macom	033
Magnavox	027, 032, 069, 334
Memorex	000
Movie Time	063, 078, 156, 203
Northcoast	314
Novaplex	618
NSC	063, 070, 156, 203
Oak	007, 019, 248
Omniview	371
Panasonic	021, 107
Paragon	000
Philips	025, 027, 028, 029, 030, 031, 060, 153, 290, 334
Philips ECG	242
Pioneer	023, 144, 260, 533
Popular Mechanics	400
Pulsar	000
PVI Stereo Visual Matrix	003
RCA	021
Realistic	207
Recoton	400
Regal	020, 259 273, 279
Regency	002
Rembrandt	011, 070
RK	304, 306, 479
Runco	000
Samsung	040, 144
Satbox	375
Scientific Atlanta	006, 008, 017, 277, 327
Seam	510
Sharp	313
Signal	015, 040
Signature	011
SL Marx	040
Spectravision	058
Sprucer	021, 307
Standard Components	096, 155
Starcom	015, 098
Starcom V	047
Starcom VI	003
Stargate	015, 040
STS	156
Sylvania	001
T-Cable Teletext	105
Tandy	258
Tatung	097
Teknica	146
Tele+1	443
TeleCaption	221
Teleservice	281
Texscan	001, 096
TFC	310
Timeless	418
Tocom	012, 013, 059
Toshiba	000
Tudi	286
TV86	063
TV COM	007, 019, 248
Uniden	225
Unika	022, 153, 207
United Artists	007
United Cable	003
Universal	022, 039, 056, 077, 078, 153, 191, 207, 322
Videoway	250
Vidtech	244
Viewstar	027, 060, 063, 111, 211, 258, 289
WaveMaster	565
Westminster cable	105
Zenith	000, 054, 525
Zentek	400

Note

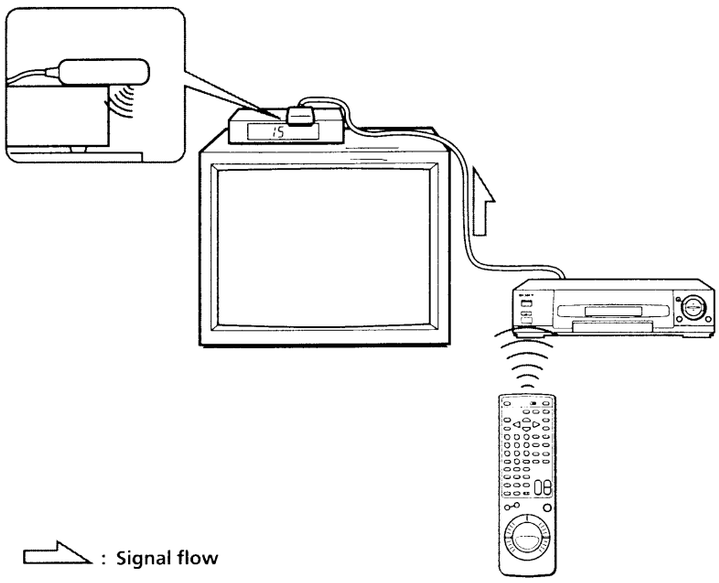
- Some cable boxes, even from brands listed on the right may not be compatible.

Tip

- DSS receiver brands and the corresponding DSS receiver code numbers are as follows.

DSS receiver brand	Code numbers
Sony	639
RCA	566

Tips for normal viewing



- Place the Cable Mouse so that it hangs out over the cable box/DSS receiver front.
- Position the cable box/DSS receiver away from the VCR.
- Do not place the cable box/DSS receiver on top of the VCR.
- Point the remote commander at the VCR, not at the cable box/DSS receiver.

To check the cable box control setting

1 Press CH +/– on the remote commander. Does the channel on the cable box/DSS receiver change? (Point the remote commander at the VCR, not at the cable box/DSS receiver.)

2 Press all 10 number buttons (0 to 9) on the remote commander. Does the channel on the cable box/DSS receiver change?

If the answer to both **1** and **2** is "yes," you have made the correct setting.

If you cannot get your VCR to control the cable box/DSS receiver

✓ Check that the Cable Mouse is connected to the CABLE BOX CONTROL jack on the VCR.

✓ Check the position of the Cable Mouse.

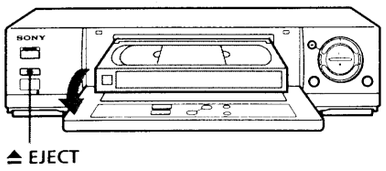
✓ Place the cable box/DSS receiver and VCR away from each other. Do not place the cable box/DSS receiver on top of the VCR.

✓ Try the setup again making sure to use the correct control code. If the cable box still does not respond, you can try other codes.

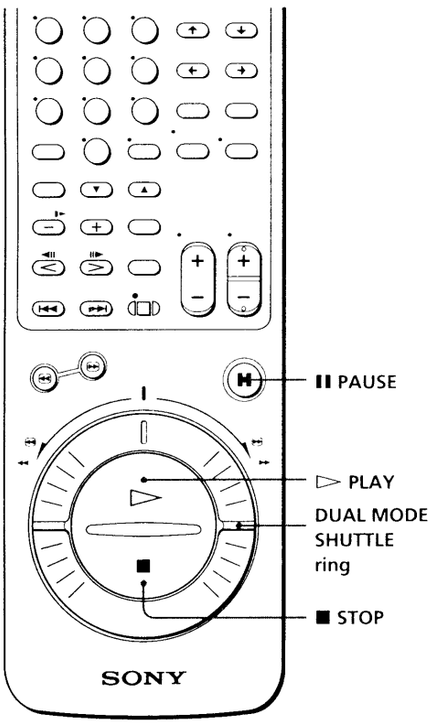
If your cable box still does not operate with the Cable Mouse, contact your cable company to see if they can provide you with a compatible cable box.

Basic Operations

Playing a tape



⏏ EJECT



Tip

- For further information on searching and playback functions, see "Playing/ searching at various speeds" on page **53**.

Note

- Tapes recorded in LP mode can be played on this VCR, while playback picture quality in modes other than normal forward speed is not guaranteed.

This section shows you how to play back a video tape.

1 **Turn on your TV and tune in to the VCR:**

- If the TV is connected to the VCR using the audio/video cable, set the TV to video input.
- If the TV is connected to the VCR using only the antenna cable, set the TV to the VCR channel (3 or 4).

2 **Open the drop down panel and insert a tape.**

The VCR turns on automatically. If you insert a tape with its safety tab removed, the VCR starts playing automatically.

3 **Press ▷ PLAY to start playing.**

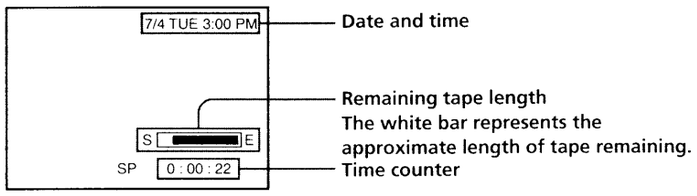
When the tape reaches the end, the VCR automatically rewinds it to the beginning. (The power remains on.)

Additional tasks

To	Press
Stop play	■ STOP
Pause play	II PAUSE
Resume play after pause	II PAUSE or ▷ PLAY
Search forward	Turn the DUAL MODE SHUTTLE (DMS) ring to ⏩ during playback
Search backward	Turn the DMS ring to ⏪ during playback
Fast-forward the tape	Turn the DMS ring to ▶▶ FF during stop
Rewind the tape	Turn the DMS ring to ◀◀ REW during stop
Eject the tape	⏏ EJECT

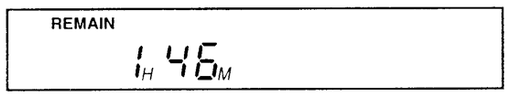
Displaying the date and time, remaining tape length and time counter

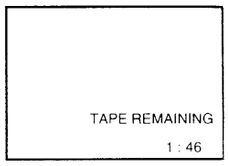
Press DISPLAY to turn the display on or off.



Displaying the remaining tape counter

Press COUNTER/REMAIN to display the remaining tape counter in the display window. To display it on the TV screen, press DISPLAY to turn the display on, then press COUNTER/REMAIN. Each time you press COUNTER/REMAIN, the time counter and the remaining tape counter appear alternately.



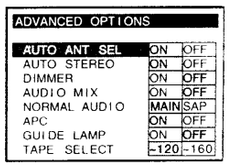


When you use the tape with more than 2-hour recording, select "~120" or "~160" from the menu.

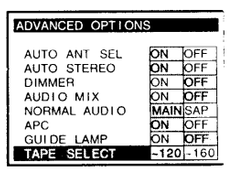
Notes

- When you insert a tape with a short tape length such as T-20, T-30 or a non-standard commercially available tape, the remaining tape length may not be correct.
- The display will not appear during still mode or slow-motion playback.
- As the remaining tape counter does not function with the tapes recorded in LP mode, the remaining tape length indicated may not be correct when you play tapes recorded in LP mode.

1 Press MENU and select ADVANCED OPTIONS.



2 Set TAPE SELECT to "~120" or "~160" using the CURSOR (↑/↓/←/→) buttons.



3 Press EXECUTE to store the setting.

Using the time counter

At the point on a tape that you want to find later, press COUNTER RESET to reset the counter to "0H00M00S." When you rewind or advance the tape to this point, refer to the counter.

Notes

- When a tape is reinserted, the counter returns to "0H00M00S."
- The counter will not work on tape portions with no recording.

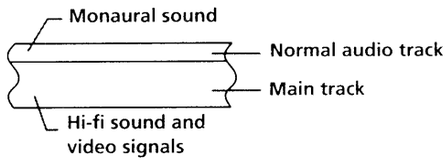
Playing stereo and bilingual programs

Press AUDIO MONITOR to select the desired sound. Each press of the button changes the display on the VCR.

To listen to a		VCR's display window
Stereo tape	**Bilingual tape**	
Stereo	Left and right channels	STEREO
Left channel	Left channel	L
Right channel	Right channel	R
Monaural on normal audio track	Sound on normal audio track (SAP)	No indicator appears

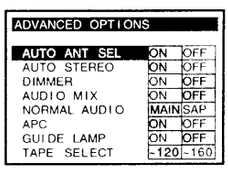
How sound is recorded on a video tape

This VCR records sound onto two different tracks. High-fidelity sound (usually stereo) is recorded onto the main track along with the picture. Monaural sound is recorded onto the normal audio track along the edge of the tape.

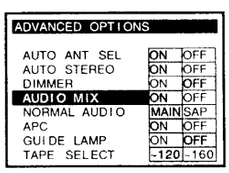


To listen to hi-fi and normal audio at the same time

1 Press MENU and select ADVANCED OPTIONS.



2 Set AUDIO MIX to ON using the CURSOR (↑/↓/←/→) buttons.
The AUDIO MONITOR button becomes inoperative, and the sound you hear is mixed.



3 Press EXECUTE to store the setting.
After playing the tape, reset AUDIO MIX to OFF.

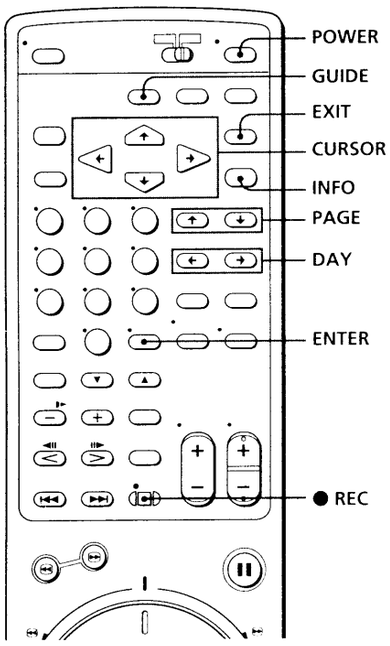
Notes

- When you play a tape recorded in monaural, the sound is heard in monaural regardless of the AUDIO MONITOR setting.
- To play a tape in stereo, you must use the A/V connections.
- If AUDIO MIX in the ADVANCED OPTIONS is set to ON, the AUDIO MONITOR button doesn't work.

Note

- If AUDIO MIX remains ON, the AUDIO MONITOR button remains inoperative.

Using the StarSight program guides



Tips

- The ◄ mark in front of a title indicates that the program starts before the displayed time slot.
- To get the StarSight program guides when the TV is connected to the VCR using only the antenna cable, make sure the VTR indicator is lit in the display window. If not, press TV/VTR.
- You can also use the CH +/– buttons to move around in the Grid Guide.

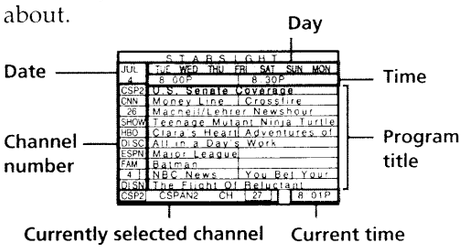
Notes

- If a title is too long for any of the screens, the last part of the title is cut off. To see the full title of the program, select the program and press INFO.
- If no title is available for a channel, a blank cell appears.
- You can see up to seven days of programs on the StarSight guides. No program titles are available after the eighth day.
- StarSight may not receive program information for local access channels.

This section shows you how to use the StarSight on-screen program guide. With StarSight, you do not need to flip through the TV guide to find out what's on channels. You just need to press some buttons, then you can easily get program guides, and even detailed program information. There are three program guides available: Grid Guide, Channel Guide, and Theme Guide.

Viewing what's on all channels: Grid Guide

Use the Grid Guide to see all programs on all available channels up to seven days in advance. You can see what's on and what each program is about.



A guide to StarSight's colors

Blue: Premium channel
Yellow: Currently selected program
Gray: Past program
Green:
- Today and up to six more day's programs
- PPV or NVOD channel

Red: Scheduled to record programs
White: All other channels

1 **Turn on your TV and tune in to the VCR:**

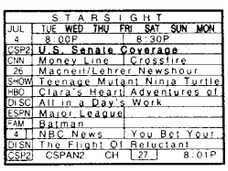
- If the TV is connected to the VCR using the audio/video cable, set the TV to video input.
- If the TV is connected to the VCR using only the antenna cable, set the TV to the VCR channel (3 or 4).

If using a cable box, turn it on.

2 **Press POWER to turn on the VCR.**

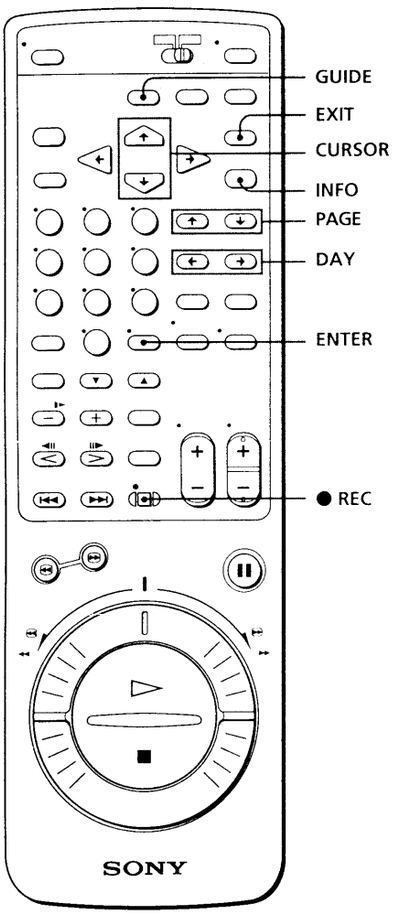
3 **Press GUIDE.**

The Grid Guide appears on the TV screen.


STARSIGHT
JUL 1
TUE WED THU FRI SAT SUN MON
8:00P 8:30P
CSP2 U.S. Senate Coverage
CNN Money Line Crossfire
26 Macneil/Lehrer Newshour
SHOW Teenage Mutant Ninja Turtle
HBO Clara's Heart Adventures of
DISC All in a Day's Work
ESPN Major League
FAM Batman
4 NBC News You Bet Your
DISN The Flight Of Reluctant
CSP2 CSPAN2 CH 27 8:01P

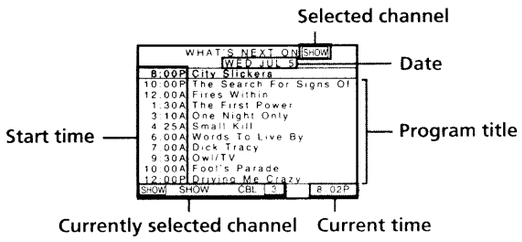
Additional tasks

To	Operation
Move around in the Grid Guide	Press the CURSOR (↑/↓/←/→) buttons.
Page through the Grid Guide	Press the PAGE (↑/↓) buttons.
Display a specific day's program guide	Press the DAY (←/→) buttons to select the day.
Tune to the current program	Press the CURSOR (↑/↓/←/→) buttons to select the program you want to tune to, then press ENTER.
Get information about the program	Press the CURSOR (↑/↓/←/→) buttons to select the program you want to get information on, then press INFO.
Record the desired program	Press ● REC. (See page **41**.)
Exit the Grid Guide	Press EXIT.



Viewing what's on a specific channel: Channel Guide

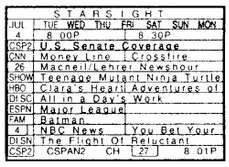
You can see the program line up on any available channel.



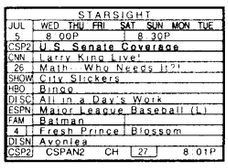
Before you start...

- Turn on your TV and tune in to the VCR. If using a cable box, turn it on.
- Press POWER to turn on the VCR.

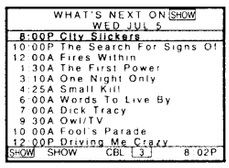
1 **Press GUIDE.**
The Grid Guide appears on the TV screen.



2 **Press the DAY (←/→) buttons to select the day you want to see.**
The selected day's program information appears.



3 **Press the CURSOR (↑/↓) buttons to select the channel you want to see the program line up for, then press GUIDE.**
The Channel Guide screen appears on the TV screen.

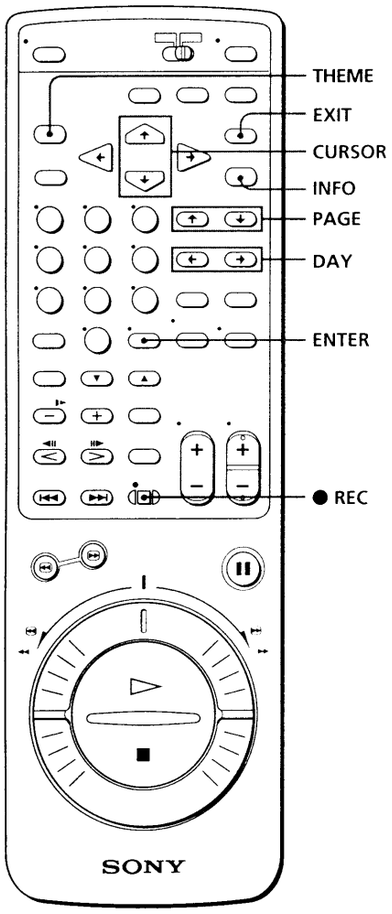


Additional tasks

To	Operation
Move around in the Channel Guide	Press the CURSOR (↑/↓) buttons.
Page through the Channel Guide	Press the PAGE (↑/↓) buttons.
Change the day	Press the DAY (←/→) buttons.
Tune to the current program	Press the CURSOR (↑/↓) buttons to highlight the current program, then press ENTER.
Get information about the program	Press the CURSOR (↑/↓) buttons to select the program you want to get information on, then press INFO.
Record the desired program	Press ● REC. (See page **41**.)
Exit the Channel Guide	Press EXIT.

Tip

- If you press the MENU button while the StarSight Channel Guide is on the TV screen, the main MENU will appear over the StarSight Channel Guide, and you can operate any menu options.

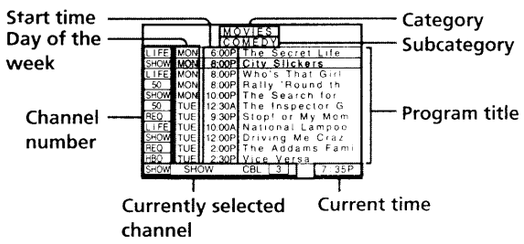


Tip

- If you press the MENU button while the StarSight Theme Guide is on the TV screen, the main MENU will appear over the StarSight Theme Guide, and you can operate any menu options.

Viewing programs by category: Theme Guide

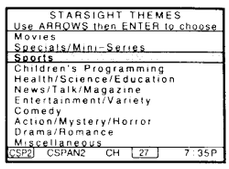
You can get the program list sorted by categories (e.g. movies, sports, news, etc.) and by subcategories (e.g. comedy, drama, baseball, etc.).



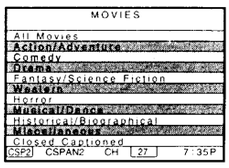
Before you start...

- Turn on your TV and tune in to the VCR. If using a cable box, turn it on.
- Press POWER to turn on the VCR.

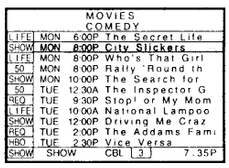
1 **Press THEME.**
The list of program categories appears on the TV screen.



2 **Press the CURSOR (↑/↓) buttons to select the category, then press ENTER.**
The list of subcategories appears.

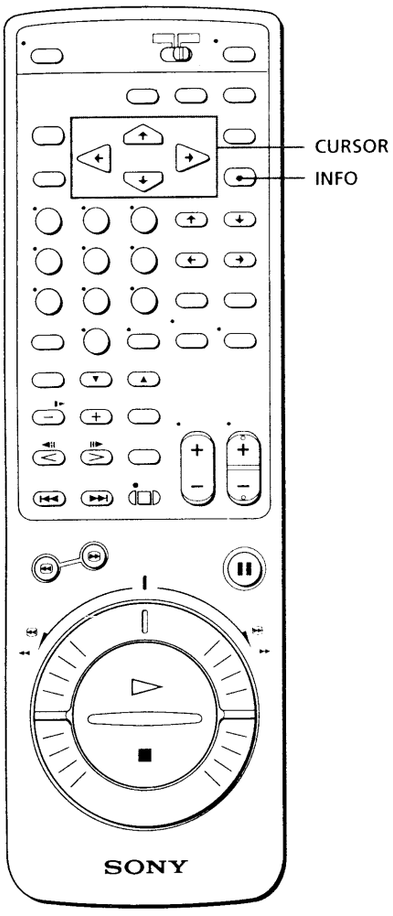


3 **Press the CURSOR (↑/↓) buttons to select the subcategory, then press ENTER.**
The current and future program lists that fit your chosen subcategory appear.


MOVIES
COMEDY
LIFE MON 6:00P The Secret Life
SHOW MON 8:00P City Slickers
LIFE MON 8:00P Who's That Girl
50 MON 8:00P Rally 'Round th
SHOW MON 10:00P The Search for
50 TUE 12:30A The Inspector G
REQ TUE 9:30P Stop! or My Mom
LIFE TUE 10:00A National Lampoo
SHOW TUE 12:00P Driving Me Craz
REQ TUE 2:00P The Addams Fami
HBO TUE 2:30P Vice Versa
SHOW SHOW CBL 3 7:35P

Additional task

To	Operation
Move around in the Theme Guide	Press the CURSOR (↑/↓) buttons.
Page through the Theme Guide	Press the PAGE (↑/↓) buttons.
Change the day	Press the DAY (←/→) buttons.
Tune to the current program	Press the CURSOR (↑/↓) buttons to highlight the current program you want to tune to, then press ENTER.
Get information about the program	Press the CURSOR (↑/↓) buttons to select the program you want to get information, then press INFO.
Record the desired program	Press ● REC. (See page **41**.)
Exit the Theme Guide	Press EXIT.



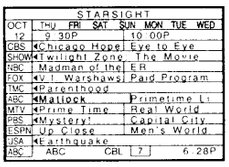
Getting information about the program: Information pop-up

You can get more detailed information listing the program title, description, actors, ratings, running time, and more (if available) about a program while viewing StarSight program guides and watching a program.

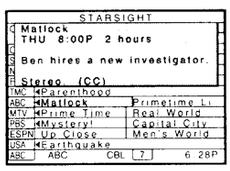
While viewing the StarSight program guides (Grid Guide, Channel Guide, Theme Guide)

1 **Press the CURSOR (↑/↓/←/→) buttons to select the program you want to get more details on.**

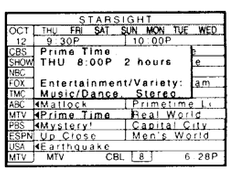
e.g. When viewing the Grid Guide


STARSIGHT
OCT 12 THU 9:30P FRI SAT SUN MON TUE WED 10:00P
CBS Chicago Hope Eye to Eye
SHOW Twilight Zone The Movie
NBC Madman of the E.R.
FOX V.I. Warshaws Paid Program
TMC Parenthood
ABC Mallock Primetime Li
MTV Prime Time Real World
PRS Mystery! Capital City
ESPN Up Close Men's World
USA Earthquake
ABC ABC CBL 7 6:28P

2 **Press INFO.**
A detailed information pop-up about the program appears on the screen.

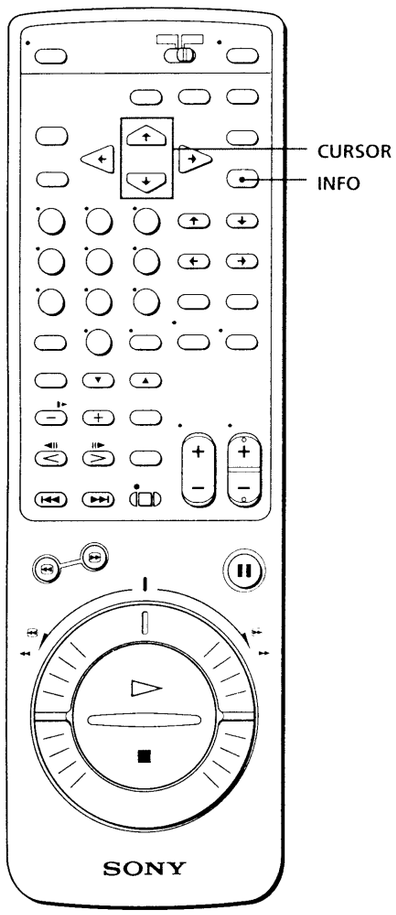


3 **If you want to get details about another program, press the CURSOR (↑/↓/←/→) buttons to select the program.**
Each new detailed information pop-up appears automatically.



To close the information pop-up
Press INFO.

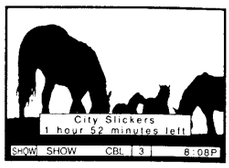
Using the StarSight program guides (continued)



While watching a program received through the VCR

1 **Press INFO.**

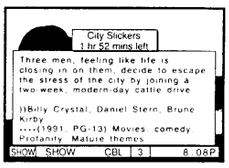
The information pop-up for the program you are watching (the program title, the time remaining, the channel number and the station letters) appears on the TV screen.



If you want to see information on another program currently broadcasting, press the CURSOR (↑/↓) buttons (browsing).
The information pop-up appears whenever you change the channels. If you want to watch the program, press ENTER. If not, it turns itself off after 20 seconds.

2 **Press INFO again to get more detailed information.**

A detailed information pop-up with additional information about the program (when available) appears on the screen.

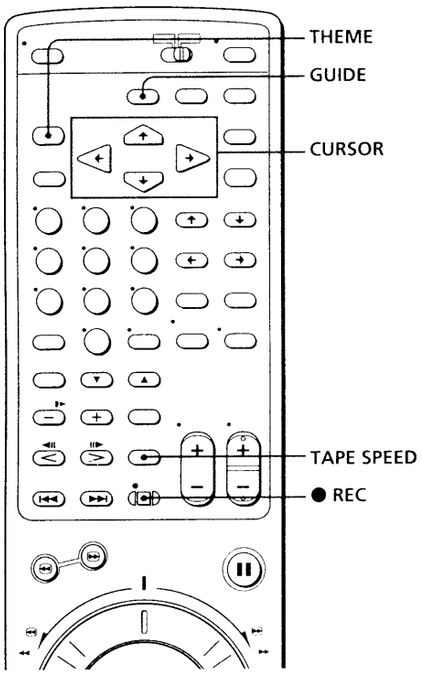

City Slickers
1 hr 52 mins left
Three men, feeling like life is closing in on them, decide to escape the stress of the city by joining a two-week, modern-day cattle drive
))Billy Crystal, Daniel Stern, Bruno Kirby
(1991, PG-13) Movies comedy
Profanity Mature themes
SHOW SHOW CBL 3 8:08P

If you want to see details on another program, press the CURSOR (↑/↓) buttons (browsing).
The detailed information pop-up appears whenever you change the channels and turns itself off after 30 seconds.

To close the information pop-up

Press INFO.

Recording TV programs from StarSight



Notes

- You can also set a StarSight timer recording for programs which are not listed yet in the program guide. To do this, select a time cell to record. You can set only 30 minute segments. To record longer programs, set enough 30 minute segments to cover the full length of the program.
- The StarSight timer will not accept settings in the following cases:
  - When you select DAILY for a Saturday or Sunday program.
  - When you try to preset a program which overlaps a program already set on the StarSight timer.
- To avoid recording conflicts, use either the StarSight timer, or the VCR's conventional timer. Avoid setting programs with both timers concurrently.

This section shows you how to record current and future TV programs using StarSight. This allows you to record TV programs more easily. You only need to press the ● REC button while highlighting a StarSight program guide selection or displaying a StarSight information pop-up. If you set a current program to record, the VCR automatically starts recording at once and stops at the end of the program. If you set a future program, the VCR is automatically programmed to record that program. You can preset up to 25 programs within a four week time frame.

1 **Turn on your TV and tune in to the VCR:**

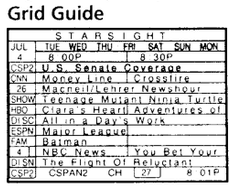
- If the TV is connected to the VCR using the audio/video cable, set the TV to video input.
- If the TV is connected to the VCR using only the antenna cable, set the TV to the VCR channel (3 or 4).

If using a cable box, turn it on.

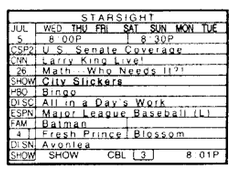
2 **Open the drop down panel and insert a tape with its safety tab in place.**

3 **Press GUIDE or THEME to open one of the StarSight program guides.**

e.g. When you open the Grid Guide

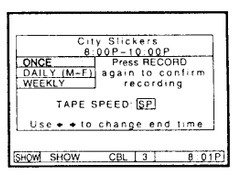

STARSIGHT
JUL TUE WED THU FRI SAT SUN MON
4 8:00P 8:30P
CSP2 U.S. Senate Coverage
CNN Money Line Crossfire
26 Macneil/Lehrer Newshour
SHOW Teenage Mutant Ninja Turtle
HBO Clara's Heart Adventures of
DISC All in a Day's Work
ESPN Major League
FAM Batman
4 NBC News You Bet Your
DISN The Flight Of Reluctant
CSP2 CSPAN2 CH 27 8:01P

4 **Select the program which you want to record from one of the guides using the CURSOR (↑/↓/←/→) buttons.**



5 **Press ● REC.**

The recording information screen appears: program title, program start and stop times, time remaining, recording option (ONCE, DAILY, WEEKLY), tape speed option, and change end time option.



(continued)

Recording TV programs from StarSight (continued)

Notes

- You cannot shorten the ending time of a recording.
- The maximum StarSight extended recording time is four hours.

Tip

- You can also set the StarSight timer setting while viewing a StarSight information pop-up. While displaying a StarSight information pop-up, follow steps ***5*** to **9**.

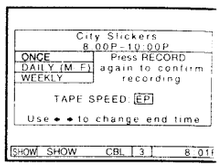
Notes

- If the TIMER indicator flashes, check the following cases.
  - Check that a tape is inserted into the VCR
  - Check that the safety tab has not been removed
  - Check that a tape is not at its end
- If you insert a tape with its safety tab removed, the VCR starts playing. To record on such a tape, cover the tab hole.
- The timer recording starts two minutes before the program starting time.
- If you preset a program to start recording at the same time you preset another program to finish recording, the last one minute of the first program will not be recorded. The VCR starts recording the second program before the first program is finished.

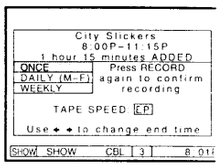
6 **Select ONCE, DAILY or WEEKLY using the CURSOR (↑/↓) buttons according to the following:**

To record a program	Select
Only once	ONCE
Monday to Friday at the same scheduled time	DAILY (M–F)
Every week at the same scheduled time	WEEKLY

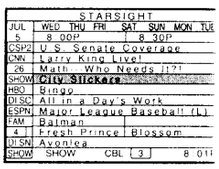
7 **Select the tape speed, SP or EP by pressing TAPE SPEED.**
See "To select tape speeds" on the following page.



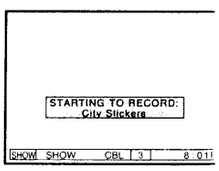
8 **Extend the ending time of the recording using the CURSOR (←/→) buttons.**
Each press changes the ending time by five minutes.



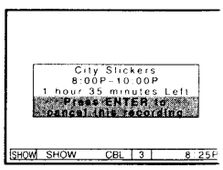
9 **Press ● REC.**
The selected program and corresponding time slot appears in the program guides with a red background, and StarSight schedules the recording. The TIMER indicator on the VCR lights up.
When using a cable box, leave it on.
The VCR automatically turns on (if it is turned off), records the program, and turns off when the program ends.



If you selected a current program, the following screen appears. The VCR automatically starts recording and turns off when the program ends.



To stop recording while StarSight recording
Press CANCEL.
The cancel confirmation screen appears, then press ENTER.



To select tape speeds

While setting a recording, select either SP or EP. EP provides recording time three times as long as SP. However, SP provides better picture quality. You can mix SP and EP on the same tape. When playing back, the VCR automatically detects the tape speed. See the table below for the maximum recording/playback time in each speed.

Tape type	Maximum recording/playback time	
	SP	EP
T-160	2 hrs. 40 min.	8 hrs.
T-120	2 hrs.	6 hrs.
T-60	1 hr.	3 hrs.
T-30	30 min.	1 hr. 30 min.

To use the VCR while StarSight recording

You can do the following tasks during StarSight timer recording.

To	Press
Reset the counter to "0H00M00S"	COUNTER RESET
Display tape information on the TV screen	DISPLAY
Watch another TV program	TV/VTR (See "Watching a TV program while recording another" on page **46**.)

Checking/canceling StarSight timer settings

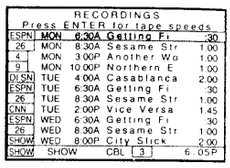
You can check and cancel the StarSight timer settings after you've set them in the VCR.

Before you start...

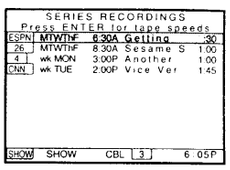
- Turn on your TV and tune in to the VCR.

1 Press POWER to turn on the VCR.

2 Press LIST.
The RECORDINGS list appears on the TV screen.

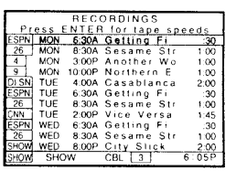

RECORDINGS
Press ENTER for tape speeds
ESPN MON 6:30A Getting Fi :30
26 MON 8:30A Sesame Str 1:00
4 MON 3:00P Another Wo 1:00
9 MON 10:00P Northern E 1:00
DISN TUE 4:00A Casablanca 2:00
ESPN TUE 6:30A Getting Fi :30
26 TUE 8:30A Sesame Str 1:00
CNN TUE 2:00P Vice Versa 1:45
ESPN WED 6:30A Getting Fi :30
26 WED 8:30A Sesame Str 1:00
SHOW WED 8:00P City Slick 2:00
SHOW SHOW CBL 3 6:05P

If you want to see the series programs you set, press LIST again.
The SERIES RECORDINGS list appears on the TV screen.

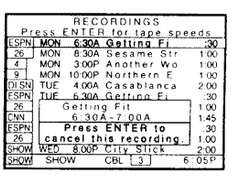

SERIES RECORDINGS
Press ENTER for tape speeds
ESPN MTWThF 6:30A Getting :30
26 MTWThF 8:30A Sesame S 1:00
4 wk MON 3:00P Another 1:00
CNN wk TUE 2:00P Vice Ver 1:45
SHOW SHOW CBL 3 6:05P

3 • If you do not want to cancel the settings, press EXIT.

• If you want to cancel the settings, select the program you want to cancel using the CURSOR (↑/↓) buttons.


RECORDINGS
Press ENTER for tape speeds
ESPN MON 6:30A Getting Fi :30
26 MON 8:30A Sesame Str 1:00
4 MON 3:00P Another Wo 1:00
9 MON 10:00P Northern E 1:00
DISN TUE 4:00A Casablanca 2:00
ESPN TUE 6:30A Getting Fi :30
26 TUE 8:30A Sesame Str 1:00
CNN TUE 2:00P Vice Versa 1:45
ESPN WED 6:30A Getting Fi :30
26 WED 8:30A Sesame Str 1:00
SHOW WED 8:00P City Slick 2:00
SHOW SHOW CBL 3 6:05P

4 Press CANCEL.
The following screen appears, then press ENTER.


RECORDINGS
Press ENTER for tape speeds
ESPN MON 6:30A Getting Fi :30
26 MON 8:30A Sesame Str 1:00
4 MON 3:00P Another Wo 1:00
9 MON 10:00P Northern E 1:00
DISN TUE 4:00A Casablanca 2:00
ESPN TUE 6:30A Getting Fi :30
26 Getting Fit 1:00
6:30A-7:00A
CNN Press ENTER to 1:45
ESPN cancel this recording. :30
26 1:00
SHOW WED 8:00P City Slick 2:00
SHOW SHOW CBL 3 6:05P

5 Press EXIT.
The VCR returns to the original screen.

Tips

- To cancel an entire series, use the SERIES RECORDINGS screen instead of RECORDINGS screen.
- To change the timer settings, cancel the program, then reset it.

Note

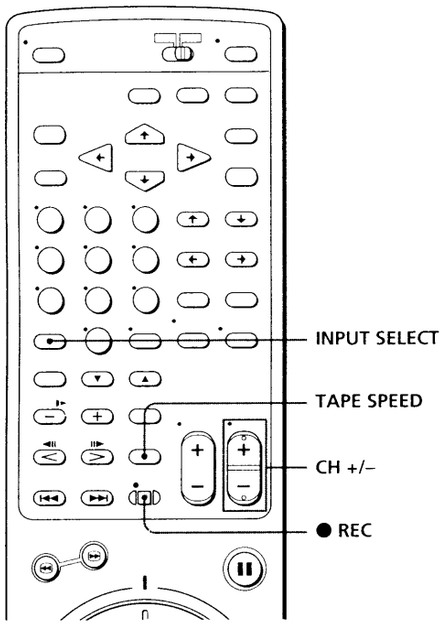
- If a red question mark appears next to entries on the RECORDINGS screen, there are no matching program titles in the StarSight database. Select the program scheduled for recording, and press GUIDE to determine the problem.

Additional operations

Recording TV programs without StarSight

This section shows you how to record TV programs manually without StarSight. This VCR provides the following ways of recording.

- Manual start and stop recording– "Manual recording" (see below)
- Manual start, automatic stop recording– "Recording using the quick timer" (page **46**)
- Automatic start and stop recording–"Recording TV programs using the timer without StarSight" (page **47**)



Manual recording

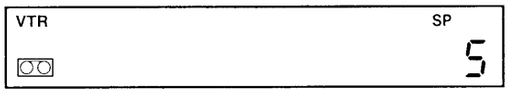
1 **Turn on your TV and tune in to the VCR:**

- If the TV is connected to the VCR using the audio/video cable, set the TV to video input.
- If the TV is connected to the VCR using only the antenna cable, set the TV to the channel for the VCR.

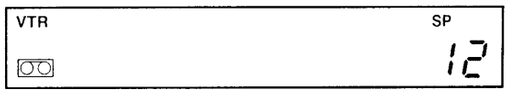
If using a cable box/DSS receiver, turn it on.

2 **Open the drop down panel and insert a tape with its safety tab in place.**

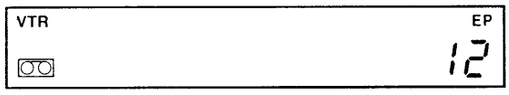
3 **Press INPUT SELECT until a channel number appears in the VCR's display window.**



4 **Select the desired channel by pressing CH +/–.**



5 **Select the tape speed, SP or EP, by pressing TAPE SPEED.**
See "To select tape speeds" on page **43**.



6 **Start recording by pressing ● REC .**
At the end of the tape, the VCR automatically rewinds it to the beginning.

To stop recording
Press ■ STOP.

Note

- If you insert a tape with its safety tab removed, the VCR starts playing. To record on this tape, cover the tab hole.

Tips

- To select channels, you can also use the number buttons on the remote commander. Enter the desired channel number using the number buttons, then press ENTER.
- To cut out an unwanted scene while recording, press ❚❚ PAUSE, turn the DUAL MODE SHUTTLE ring on the VCR to rewind the tape to the beginning of the unwanted scene, then press ❚❚ PAUSE to resume recording.
- To record a video source from the LINE IN 1 or 2 jacks, press INPUT SELECT to display "L1" or "L2" in the display window in step **4**.
- If you use Hookup 4, you have to set the VCR to the cable box output channel and cable box to the channel you want to record.

Tips

- A display appears on the TV screen indicating information about the tape, but the information will not be recorded on the tape.
- If you don't want to watch TV while recording, you can turn off the TV. When using a cable box/DSS receiver, make sure to leave it on.

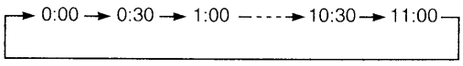
Note

- If you've inserted a tape with its safety tab removed, the VCR ejects it when you press ● REC.

Recording using the quick timer

The quick timer enables you to record for a specified period of time in intervals of 30 minutes. Once you set the recording time, the VCR automatically stops recording at the end of that time. Before you begin, check that the clock is set correctly.

After you start recording, press QUICK TIMER until the desired duration appears in the display window. The TIMER indicator on the VCR lights up. Each press increases the recording duration in increments of 30 minutes as shown below.



While recording, the display decreases minute by minute to 0:00, then the VCR turns off automatically.

To stop recording

Press ■ STOP.

To extend the recording duration while recording

Press QUICK TIMER until the desired duration appears in the display window.

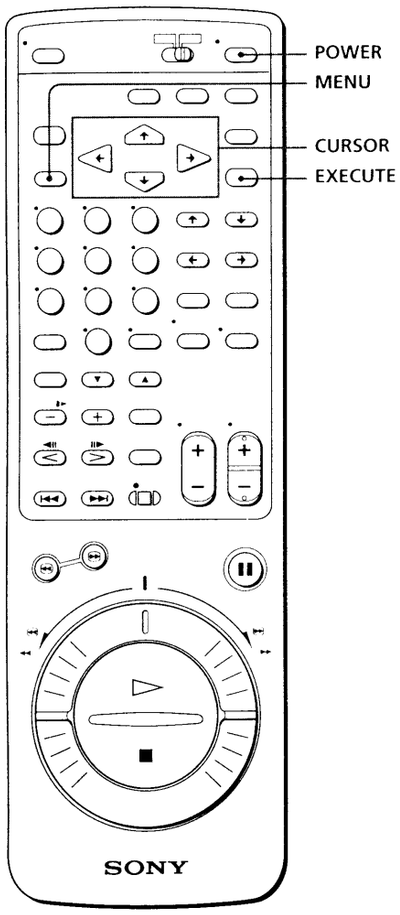
Watching a TV program while recording another

You can watch a TV program and record another at the same time.

1 If the TV is connected to the VCR using the audio/video cable, set the TV to TV input.
If the TV is connected to the VCR using only the antenna cable, press TV/VTR to turn off the VTR indicator in the display window.

2 Select the desired channel on the TV.

Recording TV programs using the timer without StarSight



Notes

- If you use Hookup 4, you have to set the VCR to the cable box output channel and the cable box to the channel you want to record.
- To avoid recording conflicts, use either the StarSight timer, or the VCR's conventional timer. Avoid setting programs with both timers concurrently.

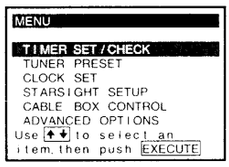
This section shows you how to let the VCR automatically start and stop recording TV programs without StarSight. You can preset up to eight programs within a one month time frame.

Before you start...

- Check that the clock is set correctly.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- Turn on your TV and tune in to the VCR. If using a cable box/DSS receiver, turn it on.

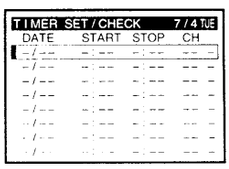
1 **Press MENU.**

The main MENU appears on the TV screen.



2 **Press the CURSOR (↑/↓) buttons to move the cursor (I) to TIMER SET/CHECK, then press EXECUTE.**

If the clock needs to be set, "Please set the clock" appears on the screen and the VCR automatically enters the clock setting mode.

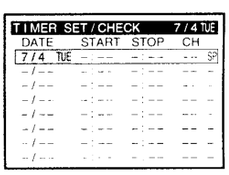


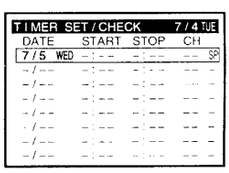
3 **Set the date to start recording:**

1 Press CURSOR →.
Make sure today's date is highlighted. If it isn't, reset the clock to the correct time.

2 Press CURSOR ↑ to set the month and date.
The day of the week is set automatically.

To record the same program every day or the same day once a week, see "Daily/weekly recording" on page **49**.

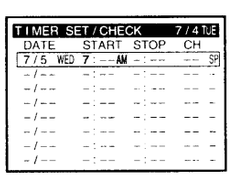


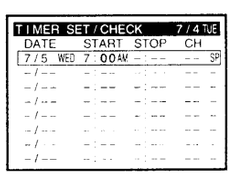


4 **Set the time to start recording:**

1 Press CURSOR → to highlight the hour under "START," then press the CURSOR (↑/↓) buttons to set the hour.

2 Press CURSOR → to highlight the minutes under "START," then press the CURSOR (↑/↓) buttons to set the minutes.





(continued)

Recording TV programs using the timer without StarSight (continued)

Tips

- To set the channel, you can also use CH +/– or number buttons.
- To record a video source from the LINE IN 1 or 2 jacks, press INPUT SELECT to display "L1" or "L2" in the "CH" position.
- When you set CABLE BOX CONTROL to ON, you cannot select "L1" or "L2."

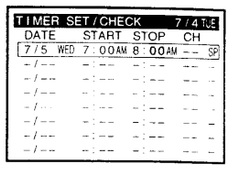
Tip

- To set the recording tape speed, you can also use TAPE SPEED.

Tip

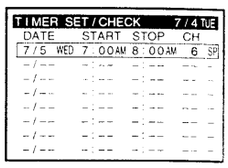
- To change or correct a setting before confirming it, press CURSOR ← to highlight the item you want to change and reset it.

5 **Press CURSOR →, then set the time to stop recording in the same way.**



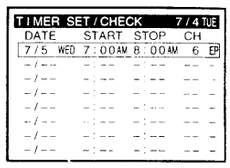
6 **Press CURSOR →, then press the CURSOR (↑/↓) buttons to select the channel you want to record.**

Only the channels preset in the VCR will appear. When using a cable box/DSS receiver, the cable box/DSS channels appear.



7 **Press CURSOR →, then press the CURSOR (↑/↓) buttons to select the tape speed, SP or EP.**

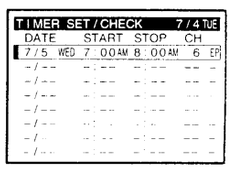
See "To select tape speeds" on page **43**.



8 **To confirm your program, press CURSOR →.**

All the settings stop being highlighted and the cursor (▮) appears in the leftmost column.

To preset another timer setting, move the cursor to the next line using CURSOR ↓ and repeat steps **3** to **8**.



9 **After making the desired timer settings, press EXECUTE.**

10 **Press POWER to turn off the VCR.**

The TIMER indicator on the VCR lights up and the VCR stands by for recording. When using a cable box/DSS receiver, leave it on.

The VCR automatically turns on and starts recording at the preset start time, and turns off at the preset stop time.

To stop recording while timer recording

Press ■ STOP.

To use the VCR while recording

You can do the following tasks during timer recording.

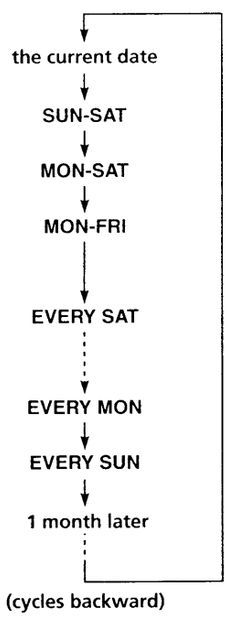
To	Press
Reset the counter to "0H00M00S"	COUNTER RESET
Display tape information on the TV screen	DISPLAY
Check the timer settings	MENU and select TIMER SET/CHECK
Watch another TV program	TV/VTR (See "Watching a TV program while recording another" on page **46**.)

Using the VCR before timer recording begins

Press POWER to turn on the VCR. The TIMER indicator on the VCR goes off and the VCR is ready for use.

After using the VCR, turn off the VCR again to turn on the TIMER indicator on the VCR. When using a cable box/DSS receiver, leave it on. Remember to turn off the VCR before the time you've set the VCR to start recording, or the timer setting will be cancelled.

Daily/weekly recording



Daily/weekly recording

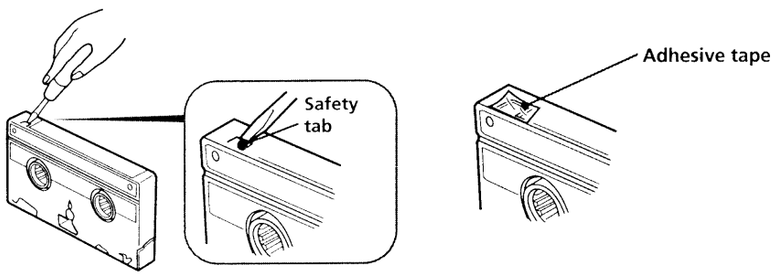
Daily recording records the same program every day of the week; weekly recording records the same program on the same day, every week.

When you set the date to start recording in step **3** of "Recording TV programs using the timer without StarSight," press CURSOR ↓ until the desired day appears. Each time you press the button, the indication changes as shown on the left.

Saving a recording

Video tapes have a safety tab to protect against accidental recording. To prevent accidental erasure of a recording, break off the safety tab with a screwdriver or other tool. A tape with its safety tab removed is ejected if you try to record on it.

To record on a tape with its safety tab removed, cover the tab hole with adhesive tape.



Recording TV programs using the timer without StarSight (continued)

Tip

- For information on how the VCR records sound, see "How sound is recorded on a video tape" on page **35**.

Note

- Set NORMAL AUDIO to MAIN when not recording SAP sound, or no sound is recorded on the normal audio track. If no sound is recorded on the normal audio track and you play the tape on a mono VCR, you will see only video—no audio will be heard. However, you will have both audio and video if you play back this tape on a stereo VCR.

Recording stereo and bilingual programs

Stereo programs

This VCR automatically records stereo programs in stereo. When stereo programs are received, the STEREO indicator in the display window lights up. If noise occurs while receiving a stereo program, record the program in monaural. Follow the steps below.

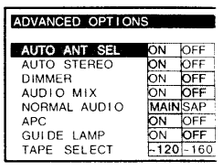
Bilingual programs

Normally, this VCR records main sound on both main and normal audio tracks. To record SAP (Second Audio Program) sound on the normal audio track, follow the steps below.

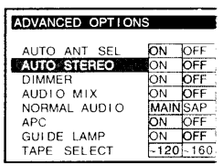
Before you start...

- Turn on your TV and tune in to the VCR.
- Press POWER to turn on the VCR.

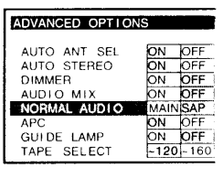
1 Press MENU and select ADVANCED OPTIONS.



2 • To record stereo programs in monaural:
Set AUTO STEREO to OFF using the CURSOR (↑/↓/←/→) buttons.



• To record SAP sound on the normal audio track:
Set NORMAL AUDIO to SAP using the CURSOR (↑/↓/←/→) buttons.



3 Press EXECUTE to store the setting.

To monitor SAP sound while recording

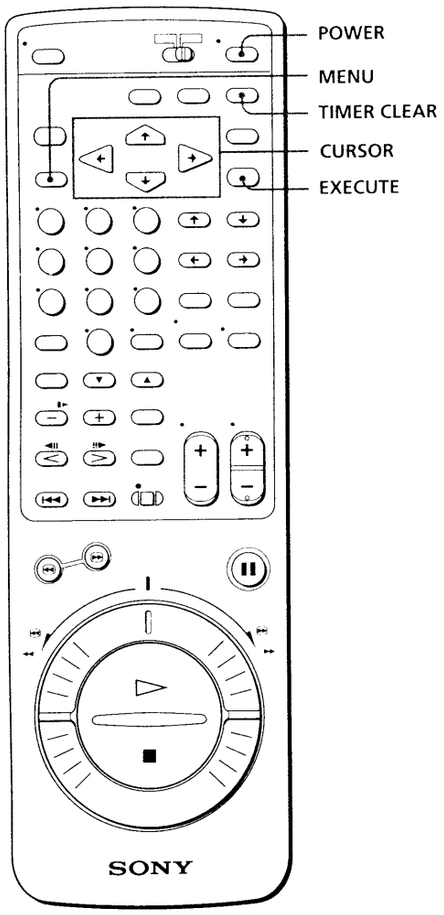
Press AUDIO MONITOR until the SAP indicator lights up in the display window.

Checking/changing/cancelling timer settings

You can check, change and cancel the timer settings after you've stored them in the VCR.

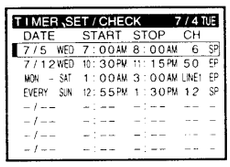
Before you start...

- Turn on your TV and tune in to the VCR.



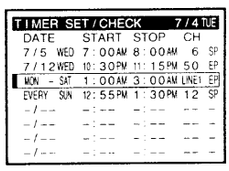
1 Press POWER to turn on the VCR. The TIMER indicator on the VCR goes off.

2 Press MENU and select TIMER SET/CHECK.


TIMER SET/CHECK 7/4 TUE
DATE START STOP CH
7/5 WED 7:00AM 8:00AM 6 SP
7/12 WED 10:30PM 11:15PM 50 EP
MON - SAT 1:00AM 3:00AM LINE1 EP
EVERY SUN 12:55PM 1:30PM 12 SP

3 Check the timer settings:

- If you do not want to change or cancel the settings, press EXECUTE, then turn off the VCR to return to recording standby.
- If you want to change or cancel the settings, press the CURSOR (↑/↓) buttons to move the cursor (▮) to the setting you want to change or cancel.


TIMER SET/CHECK 7/4 TUE
DATE START STOP CH
7/5 WED 7:00AM 8:00AM 6 SP
7/12 WED 10:30PM 11:15PM 50 EP
MON - SAT 1:00AM 3:00AM LINE1 EP
EVERY SUN 12:55PM 1:30PM 12 SP

4 Change or cancel the timer setting:

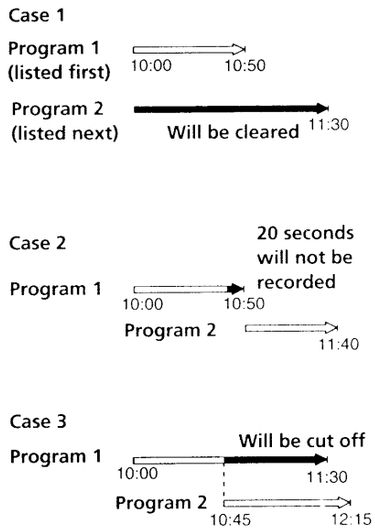
- To change the setting, press the CURSOR (←/→) buttons to highlight the item you want to change, and reset it using the CURSOR (↑/↓) buttons. Then, press CURSOR → to move the cursor to the leftmost column.
- To cancel the setting, press TIMER CLEAR.

5 Press EXECUTE.
The VCR returns to the original screen. If there are any other timer settings left in the TIMER SET/CHECK menu, turn off the VCR to return to recording standby.

To check the timer settings during timer recording

Press MENU and select TIMER SET/CHECK. After checking, press EXECUTE to turn off the display.

Recording TV programs using the timer without StarSight (continued)



When the timer settings overlap

The VCR will not record overlapping programs. If any of your timer settings overlap, change the settings.

Case 1: ***If you preset two programs to start recording at the same time...***

The program listed first in the TIMER SET/CHECK menu has priority over the other program. The timer setting of the lower priority program will be erased from the TIMER SET/CHECK menu when the first program begins recording.

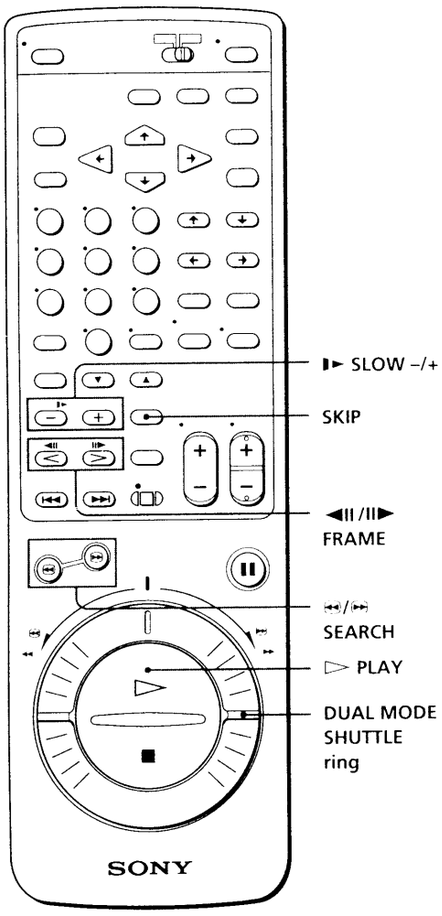
Case 2: ***If you preset program 2 to start recording at the same time you preset program 1 to finish recording...***

The last 20 seconds of program 1 will not be recorded because the VCR will enter recording pause for program 2 before program 1 is finished.

Case 3: ***If you preset program 2 to start recording before program 1 is finished recording...***

Program 2 will start recording before program 1 has finished.

Playing/searching at various speeds



Tip

- Adjust the picture using the ▼/▲ TRACKING NORMAL/SLOW STILL ADJUST buttons if:
  - Streaks appear while playing in slow motion.
  - Bands appear on the top or bottom while pausing.
  - The picture shakes while pausing.

Note

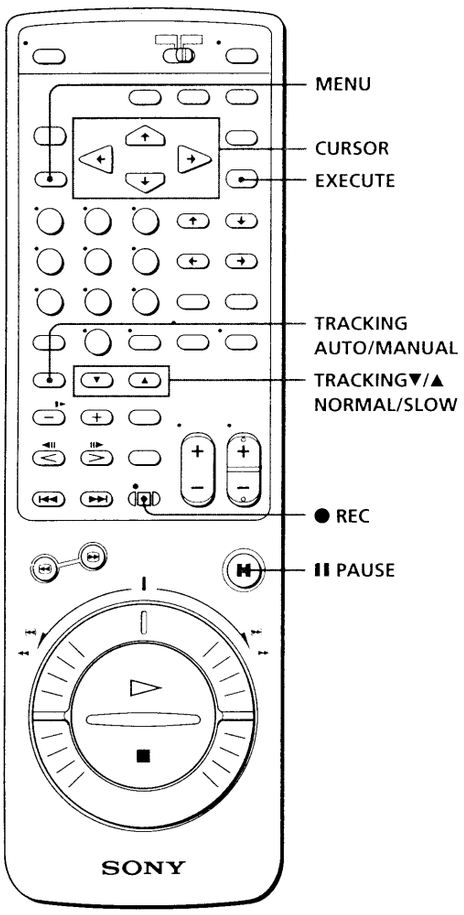
- Tapes recorded in LP mode can be played on this VCR, while playback picture quality in modes other than normal forward speed is not guaranteed.

You can play back a tape at various speeds: high-speed, slow motion, frame by frame and so on. These options are also useful for searching for a specific point during playback. The sound is muted during these operations.

Playback options	Operation	To resume normal playback
Playing at various speeds: One-fifth the normal speed Twice the normal speed High speed	During playback or pause, turn the DUAL MODE SHUTTLE ring right or left to: 1/5 ×2 ⏭ or ⏮	Release the ring.
Viewing the picture during fast-forward or rewind	During fast-forward, turn the DUAL MODE SHUTTLE ring to ►► FF. During rewind, turn the ring to ◄◄ REW.	To return to the previous mode, release the ring.
Locking in a high-speed scan	During playback or pause, press ⏭ SEARCH or ⏮ SEARCH . To change direction, press ◄II FRAME (backward) or II► FRAME (forward).	Press ▷ PLAY.
Locking in a slow-motion scan	During playback or pause, press I► SLOW –/+. You can increase the playback speed with the + button and decrease the speed with the – button. To change direction, press ◄II FRAME (backward) or II► FRAME (forward).	Press ▷ PLAY.
Playing frame by frame	During pause, press II► FRAME to advance the picture one frame or ◄II FRAME to reverse the picture one frame.	Press ▷ PLAY.
Skipping a scene	During playback, press SKIP. Pressing once skips about 30 seconds.	The VCR automatically resumes normal playback.
Rewind and automatically restart play	During stop, press ▷ PLAY on the VCR while holding the DUAL MODE SHUTTLE ring on the VCR at the ◄◄ position.	——

Adjusting the picture

The VCR automatically adjusts the picture for the best possible playback or recording. If, however, you find the automatic adjustment unsatisfactory, you can adjust the picture manually.



Note

- Auto tracking adjustment is not possible for tapes recorded in LP mode.

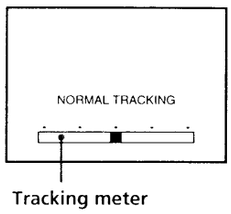
Notes

- Tapes recorded using the APC function are played normally on VCRs that do not have the APC function.
- Press II PAUSE to release recording after the APC indicator stops flashing. If you start recording before the APC indicator stops flashing, the APC function is cancelled.

Adjusting the tracking

Though the VCR automatically adjusts the tracking when playing a tape (the AUTO TRACKING indicator flashes in the display window, then lights steadily), distortion may occur if the tape was recorded in poor condition. If so, manually adjust the tracking condition.

Press ▼/▲ TRACKING NORMAL/SLOW to display the tracking meter. The distortion should disappear as you press one of the two buttons. If you cannot get a clear picture with manual adjustment, press TRACKING AUTO/MANUAL to return to automatic adjustment.



Tracking meter

About Adaptive Picture Control (APC)

Adaptive Picture Control (APC) automatically improves recording and playback quality by adjusting the VCR to the condition of the video heads and tape. To maintain better picture quality, we recommend that you set APC to ON in the ADVANCED OPTIONS menu (with the APC indicator in the display window lit.)

To use APC during playback

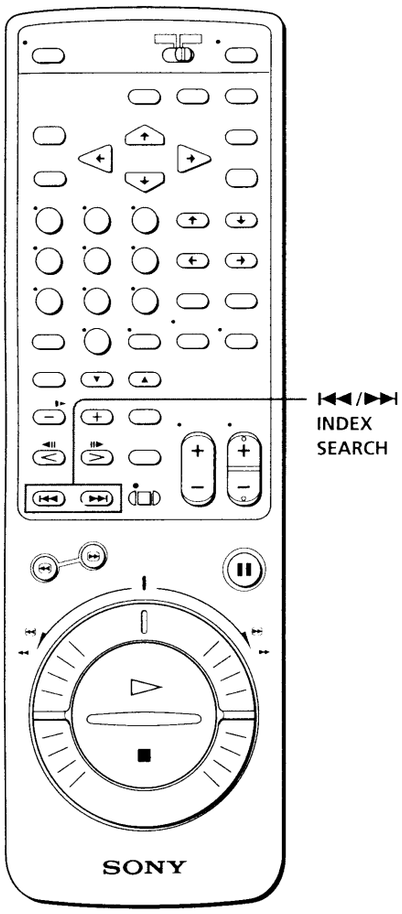
The APC function automatically works on all types of tapes, including rental tapes. You can play a tape using the APC function even if the tape was not recorded with it.

To use APC while recording

Whenever you insert a tape and first start recording, the VCR adjusts to the tape using the APC function (the APC indicator flashes rapidly). This adjustment is retained until the tape is ejected. There is a short delay before the VCR actually starts recording while the VCR analyzes the tape.

If you want to start recording precisely the first time you record, set the VCR to recording pause mode (the APC indictor flashes slowly) and press ● REC to let the VCR analyze the tape. When the APC indicator stops flashing, press II PAUSE to start recording. Recording begins immediately.

Searching using the index function



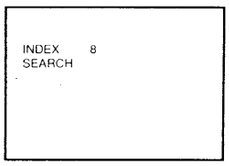
The VCR automatically marks an index signal at the point where recording starts (with the exception of when you start recording from recording pause). Use this as a reference to find the beginning of the recording. Since the index number indicates the relative position from the current position, specify how many index signals ahead or behind the specific index signal is from the current position. The VCR can search up to 99 index signals ahead or behind of the current position.

1 **Insert an indexed tape into the VCR.**

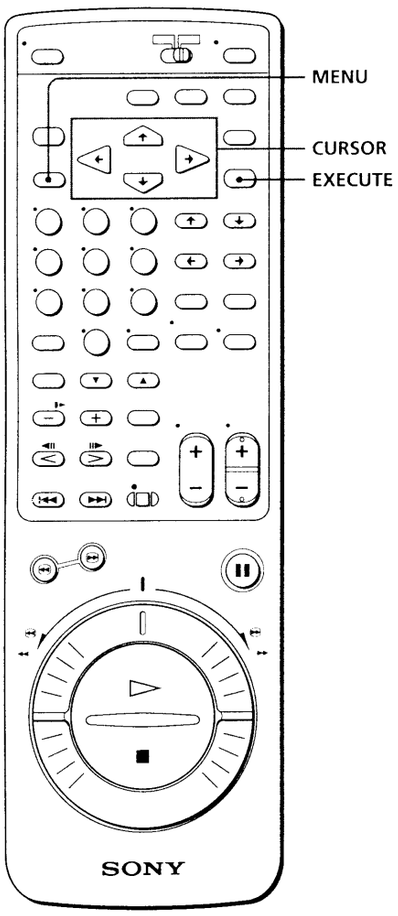
2 **Press the I◄◄/►►I INDEX SEARCH buttons repeatedly until the index number you want appears on the TV screen:**

- To locate succeeding programs, press ►►I INDEX SEARCH.
- To locate preceding programs, press I◄◄ INDEX SEARCH.

The VCR starts searching and the index number on the TV screen counts down to zero. Playback starts automatically from that point.

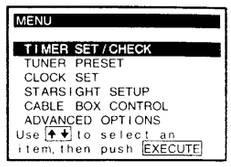


Using the ADVANCED OPTIONS

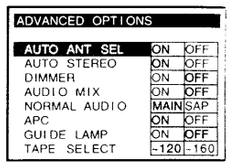


The ADVANCED OPTIONS allow you to make a number of optional setup choices. For a list of menu choices, see the table on the following page.

1 **Press MENU.**
The main MENU appears on the TV screen.



2 **Press the CURSOR (↑/↓) buttons to move the cursor (▮) to ADVANCED OPTIONS, then press EXECUTE.**
The ADVANCED OPTIONS menu appears on the TV screen.



3 **Press the CURSOR (↑/↓) buttons to move the cursor (▮) to the desired menu choice.**

4 **Set the item to the desired setting using the CURSOR (←/→) buttons.**

5 **Press EXECUTE to return to the original screen.**

Menu choices

Initial settings are indicated in bold letters.

Menu option	Set this option to
AUTO ANT SEL	• **ON** if your TV is connected only to VHF/UHF OUT on the VCR. To play a tape, set the TV to the VCR channel (channel 3 or 4). • OFF if your TV is connected to both VHF/UHF OUT and LINE OUT on the VCR. To play a tape, set the TV to VCR input.
AUTO STEREO	• **ON** to receive stereo programs. • OFF to reduce noise in a stereo program. Although the sound may improve, the sound becomes monaural. For details, see page **50**.
DIMMER	• ON to make the display window dim. • **OFF** to make it brighter.
AUDIO MIX	• ON to listen to the sound recorded on the hi-fi audio track and the normal audio track simultaneously. The AUDIO MONITOR button becomes inoperative. • **OFF** to select the sound using the AUDIO MONITOR button. For details, see page **35**.
NORMAL AUDIO	• **MAIN** to record the main sound on both the hi-fi and normal audio tracks. • SAP to record the SAP (Second Audio Program) sound on the normal audio track. The main sound is recorded on the hi-fi audio track. For details, see page **50**.
APC	• **ON** to activate the APC (Adaptive Picture Control) function, that improves recording and playback quality. • OFF to deactivate it. For details, see page **54**.
GUIDE LAMP	• ON to illuminate the borders of the DUAL MODE SHUTTLE ring and the buttons on the VCR which you can operate in the present condition, telling you what you can do with your VCR. • **OFF** to turn them off.
TAPE SELECT	"**~120**" or "~160" to select the length of the tape, allowing to display the remaining tape counter. For details, see page **34**.

Editing

Editing with another VCR

This section shows you how to edit to or from another VCR or camcorder. You can make a copy of a tape using this VCR for recording or playback.

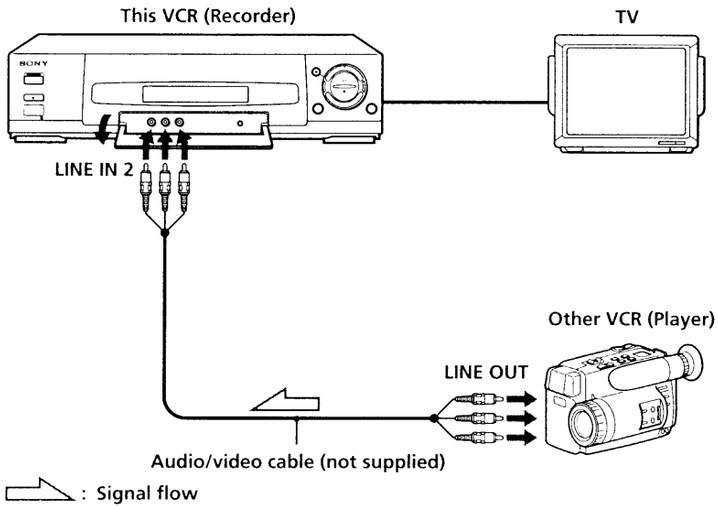
Tips

- Make sure you connect the plugs to jacks of the same color.
- To connect the other VCR, you can use the LINE IN 1 jacks as well. In this case, press INPUT SELECT to display "L1" in the display window.
- If the other VCR is a monaural type, leave the red plugs unconnected.

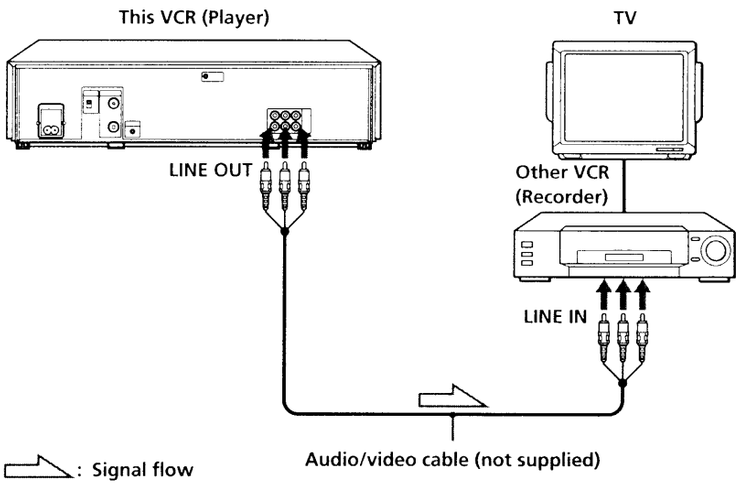
Note

- When connecting the VCRs, do not simultaneously connect the LINE IN and LINE OUT jacks on your VCR. A humming noise may occur if you do this.

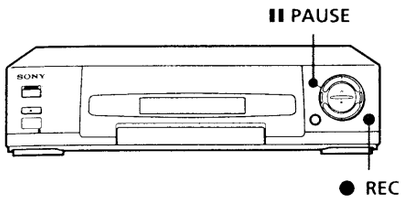
How to hook up to record on this VCR



How to hook up to record to another VCR



Operation (when recording on this VCR)



Before you start...

- Press INPUT SELECT to display "L2" in the display window.
- Press TAPE SPEED on the remote commander to select the recording tape speed (SP/EP).

1 **Insert a source tape with its safety tab removed into the other (playback) VCR. Search for the point to start playback and set it to playback pause.**

2 **Insert a tape into this (recording) VCR. Search for the point to start recording and press II PAUSE.**

3 **Press ● REC on this VCR and set it to recording pause.**

4 **To start editing, press the II PAUSE buttons on both VCRs to release the VCRs from pause.**
For best results, press II PAUSE on this VCR just before pressing the pause button on the other VCR.

To stop editing

Press the ■ STOP buttons on both VCRs.

Tips

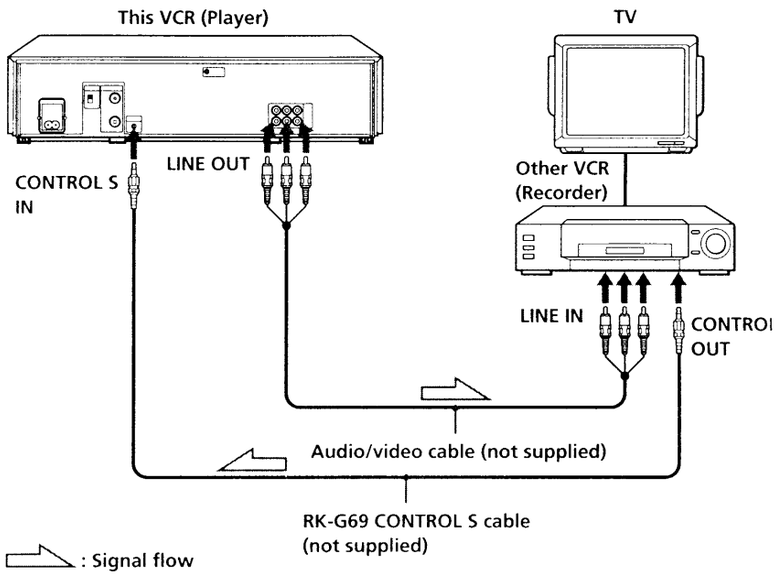
- To release the VCRs from pause, use the II PAUSE buttons on the VCRs so that you can edit more precisely.
- To cut out unwanted scenes while editing, press II PAUSE on this VCR when an unwanted scene begins. When it ends, press II PAUSE again to resume recording .

Synchronized editing

If other VCR has a CONTROL S OUT jack and a SYNCHRO EDIT button for synchronized editing, connect the VCRs via the CONTROL S jacks. This additional connection lets you control both VCRs from one VCR for easier editing.

How to hook up via the CONTROL S jacks

The CONTROL S connection only enables you to pause and release pause.



Operation (when recording on the other VCR)

1 **Insert a source tape with its safety tab removed into this (playback) VCR. Search for the point to start playback and press II PAUSE to set it to playback pause.**

2 **Insert a tape into the other (recording) VCR. Search for the point to start recording and press the pause button.**

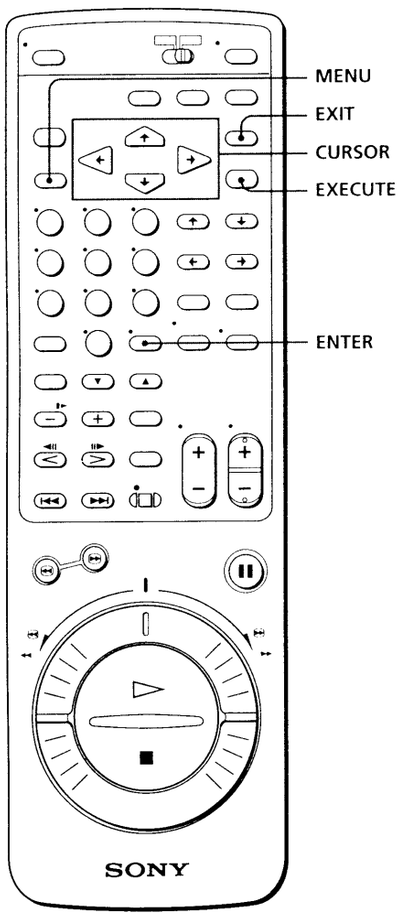
3 **Press the recording button on the other VCR to pause for recording.**

4 **To start editing, press SYNCHRO EDIT on the other VCR.**

5 **At the point you want to stop recording, press SYNCHRO EDIT to stop editing.**
Both VCRs return to pause.

To stop editing
Press the ■ STOP buttons on both VCRs.

Customizing StarSight's setup



Note

- You cannot deselect a channel you have set for StarSight timer recording.

This section shows you how to customize StarSight's setup. Using the STARSIGHT SETUP menu, you can do the following:

- Deselect or select channels on the StarSight program guides — "Selecting channels on the StarSight program guides" (See below)
- Arrange the channels in your preferred order —"Changing the channel order" (page **62**)
- Change the time to receive StarSight data —"Changing the scheduled data reception time" (page **63**)
- Change the cable box and service setting —"Changing the cable box/service" (page **63**)
- Change your registered address—"Re-activating StarSight or changing address" (page **64**)
- Watch the StarSight demonstration—"Demonstrating the main features of StarSight" (page **64**)

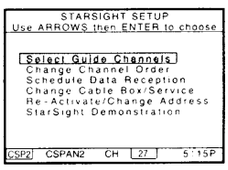
Before you start...

- Turn on your TV and tune in to the VCR. If using a cable box, turn it on.
- Press POWER to turn on the VCR.

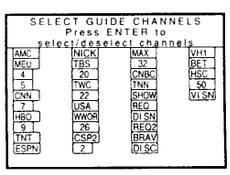
Selecting channels on the StarSight program guides

You can select the channels you want to see listed on the StarSight program guides. Once you set the channels, only the selected channels appear on the program guides until you change it.

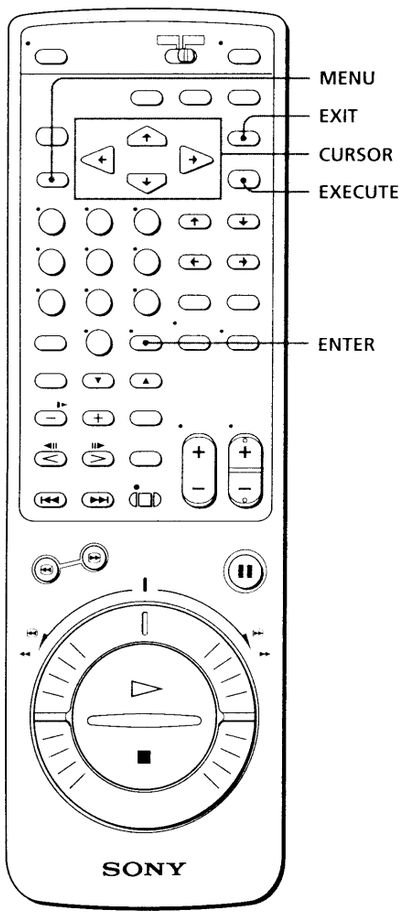
1 **Press MENU and select STARSIGHT SETUP.**
The STARSIGHT SETUP menu appears.



2 **Press the CURSOR (↑/↓) buttons to select Select Guide Channels, then press ENTER.**
The SELECT GUIDE CHANNELS screen which lists all available channels in your area appears.



(continued)



Tip

- If you want to reset the channels to the initial order, select RESET, then press ENTER.

3 **Choose the channel to deselect or select:**

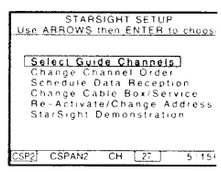
- To deselect a channel, press the CURSOR (↑/↓/←/→) buttons to highlight the channel you want to deselect, then press ENTER. The selected channel's background turns gray indicating that the channel is deselected.
- To select a channel, press the CURSOR (↑/↓/←/→) buttons to highlight the gray background of the channel you want to restore, then press ENTER.
  The selected channel's background returns to its original color indicating that the channel is restored.

4 **Repeat step 3 to select or deselect channels, then press EXIT.**

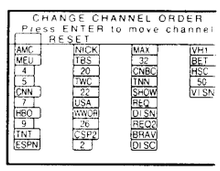
Changing the channel order

You can arrange the channels in your preferred order.

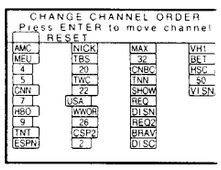
1 **Press MENU and select STARSIGHT SETUP.**
The STARSIGHT SETUP menu appears.



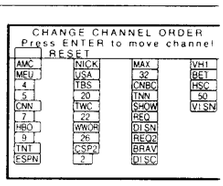
2 **Press the CURSOR (↑/↓) buttons to select Change Channel Order, then press ENTER.**
The CHANGE CHANNEL ORDER screen appears.



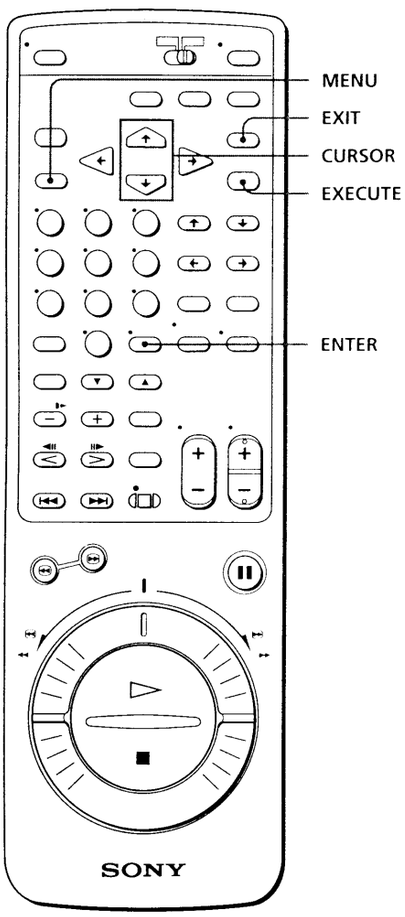
3 **Press the CURSOR (↑/↓/←/→) buttons to select the channel you want to move, then press ENTER.**
The selected channel shifts slightly to the left.



4 **Press the CURSOR (↑/↓/←/→) buttons to select the position you want to move the selected channel to, then press ENTER.**
The selected channel appears in the selected position.



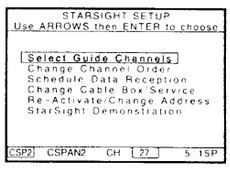
5 **Repeat steps 3 and 4 until you have the order you want, then press EXIT.**



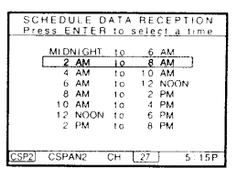
Changing the scheduled data reception time

The first time you set up StarSight, your VCR is set to receive data from 2:00 A.M. to 8:00 A.M. If you want to use the VCR during these hours, change the time to receive StarSight data. (If you use a cable box, the cable box must be turned on.)

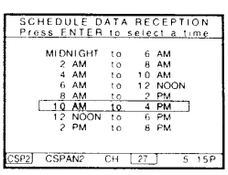
1 **Press MENU and select STARSIGHT SETUP.**
The STARSIGHT SETUP menu appears.



2 **Press the CURSOR (↑/↓) buttons to select Schedule Data Reception, then press ENTER.**
The SCHEDULE DATA RECEPTION screen appears.


SCHEDULE DATA RECEPTION
Press ENTER to select a time
MIDNIGHT to 6 AM
2 AM to 8 AM
4 AM to 10 AM
6 AM to 12 NOON
8 AM to 2 PM
10 AM to 4 PM
12 NOON to 6 PM
2 PM to 8 PM
CSP2 CSPAN2 CH 27 5:15P

3 **Press the CURSOR (↑/↓) buttons to select the desired time period, then press ENTER.**

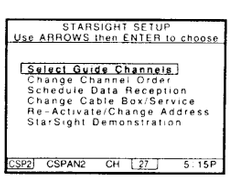

SCHEDULE DATA RECEPTION
Press ENTER to select a time
MIDNIGHT to 6 AM
2 AM to 8 AM
4 AM to 10 AM
6 AM to 12 NOON
8 AM to 2 PM
10 AM to 4 PM
12 NOON to 6 PM
2 PM to 8 PM
CSP2 CSPAN2 CH 27 5:15P

4 **Press EXIT.**

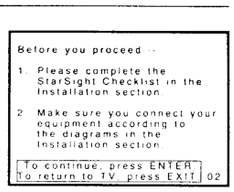
Changing the cable box/service

If you change, add, or remove the cable box, or change, add or cancel the cable service, you need to change the StarSight setup. Since a change in your cable box or cable service may mean a change in your channel line up, your VCR needs to download the new channel line-up to its StarSight unit.

1 **Press MENU and select STARSIGHT SETUP.**
The STARSIGHT SETUP menu appears.

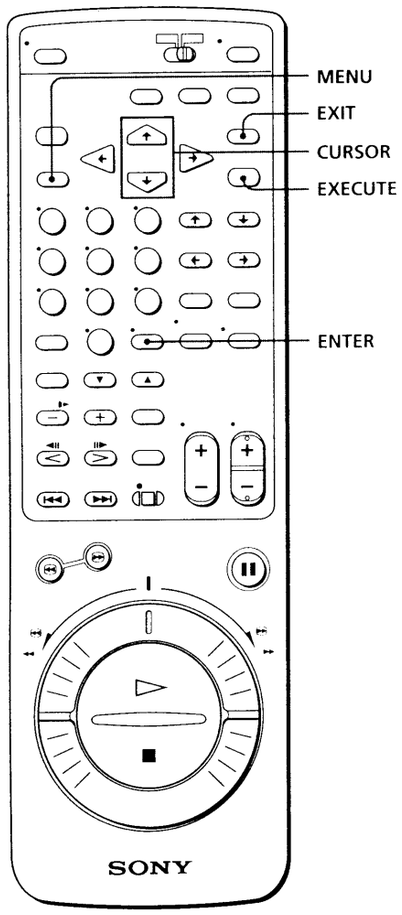


2 **Press the CURSOR (↑/↓) buttons to select Change Cable Box/ Service, then press ENTER.**
The following screen appears.


Before you proceed . .
1 Please complete the StarSight Checklist in the Installation section.
2 Make sure you connect your equipment according to the diagrams in the Installation section.
To continue, press ENTER.
To return to TV, press EXIT. 02

3 **Follow steps 4 to 13 on pages 21 to 23.**

Customizing StarSight's setup (continued)



Tip

- If you want to see the quick StarSight demonstration after activating, press MENU and select STARSIGHT SETUP, then select StarSight Demonstration.

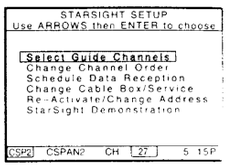
Notes

- Do not select Continuous Retail Demo because this is only for the retail stores.
- To quit Continuous Retail Demo, press EXIT while the "EXIT" message appears on the TV screen.

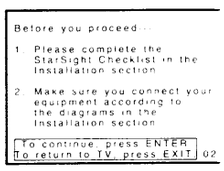
Re-activating StarSight or changing address

If you move to a new region, you need to re-activate in order to receive the correct StarSight data for the channels available in your new region.

1 **Press MENU and select STARSIGHT SETUP.**
The STARSIGHT SETUP menu appears.



2 **Press the CURSOR (↑/↓) buttons to select Re-Activate/Change Address, then press ENTER.**
The following screen appears.

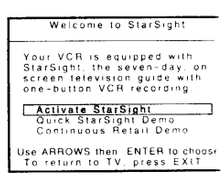

Before you proceed...
1 Please complete the StarSight Checklist in the Installation section.
2 Make sure you connect your equipment according to the diagrams in the Installation section.
To continue, press ENTER.
To return to TV, press EXIT. 02

3 **Follow steps 4 to 13 on pages 21 to 23.**

Demonstrating the main features of StarSight

If you want to see how StarSight works before activating StarSight, you can see the quick StarSight demonstration.

1 **Press MENU and select STARSIGHT SETUP.**
The STARSIGHT menu appears.


Welcome to StarSight
Your VCR is equipped with StarSight, the seven-day, on screen television guide with one-button VCR recording.
Activate StarSight
Quick StarSight Demo
Continuous Retail Demo
Use ARROWS then ENTER to choose
To return to TV, press EXIT

2 **Press the CURSOR (↑/↓) buttons to select Quick StarSight Demo, then press ENTER.**
The StarSight quick demonstration starts.

3 **To quit the demonstration, press EXIT.**

PBS (Public Broadcasting Service) stations and channel numbers

Choose the station closest to your location. Your closest station may be in a bordering state.

City	Station	Channel
Alabama		
Anniston	WCIQ	7
Birmingham	WBIQ	10
Dothan	WGIQ	43
Decatur	WHIQ	25
Huntsville	WHIQ	25
Mobile	WEIQ	42
Mobile	WSRE	23
Montgomery	WAIQ	26
Alaska		
Anchorage	KAKM	7
Fairbanks	KUAC	9
Arizona		
Phoenix	KAET	8
Tucson	KUAT	6
Arkansas		
Little Rock	KETS	2
Pine Bluff	KETS	2
California		
Eureka	KEET	13
Fresno	KVPT	18
Los Angeles	KCET	28
Monterey	KTEH	54
Sacramento	KVIE	6
Salinas	KTEH	54
San Diego	KPBS	15
Santa Barbara	KCET	28
San Francisco	KQED	9
San Jose	KQED	9
Stockton	KVIE	6
Redding	KIXE	9
Visalia	KVPT	18
Colorado		
Colorado Springs	KTSC	8
Denver	KRMA	6
Pueblo	KTSC	8
Connecticut		
Bridgeport	WEDW	49
Hartford	WEDH	24
New Haven	WEDH	24
New Haven	WEDY	65
Norwich	WEDN	53
Delaware		
Seaford	WDPB	64
Wilmington	WHYY	12

City	Station	Channel
District of Columbia		
Washington, D. C.	WETA	26
Florida		
Dayton Beach	WMFE	24
Ft. Lauderdale	WPBT	2
Ft. Myers	WSFP	30
Gainesville	WUFT	5
Jacksonville	WJCT	7
Miami	WPBT	2
Naples	WSFP	30
Orlando	WMFE	24
Panama City	WFSG	56
Pensacola	WSRE	23
Tampa	WEDU	3
St. Petersburg	WEDU	3
Tallahassee	WFSU	11
Thomasville	WFSU	11
West Palm Beach	WXEL	42
Georgia		
Albany	WABW	14
Atlanta	WGTV	8
Augusta	WCES	20
Chatsworth	WCLP	18
Columbus	WJSP	28
Dawson	WACS	25
Macon	WDCO	15
Savannah	WVAN	9
Waycross	WXGA	8
Hawaii		
Honolulu	KHET	11
Waikiki	KMEB	10
Idaho		
Boise	KAID	4
Idaho Falls	KISU	10
Twin Falls	KITT	13
Illinois		
Carbondale	WSIU	8
Champaign	WILL	12
Chicago	WTTW	11
Moline	WQPT	24
Peoria	WTVP	47
Quincy	WQEC	27
Rock Island	WQPT	24
Springfield	WILL	12

(continued)

PBS (Public Broadcasting Service) stations and channel numbers (continued)

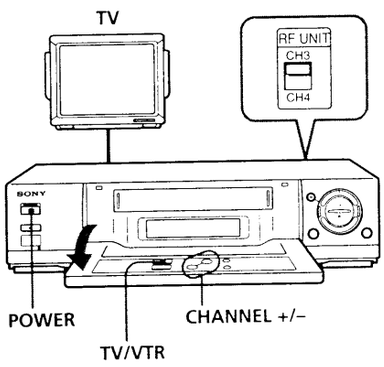
City	Station	Channel
Indiana		
Elkhart	WNIT	34
Evansville	WNIN	9
Fort Wayne	WFWA	39
Lafayette	WFYI	20
Indianapolis	WFYI	20
South Bend	WNIT	34
Terre Haute	WVUT	22
Vincenness	WVUT	22
Iowa		
Ames	KDIN	11
Cedar Rapids	KIIN	12
Council Bluffs	KBIN	32
Davenport	KQCT	36
Des Moines	KDIN	11
Fort Dodge	KTIN	24
Iowa City	KIIN	12
Mason City	KYIN	24
Red Oak	KHIN	36
Sioux City	KSIN	27
Waterloo	KRIN	32
Kansas		
Lakin	KSWK	3
Pittsburg	KOZJ	26
Topeka	KTWU	11
Kentucky		
Bowling Green	WKYU	24
Cape Girardeau	WSIU	8
Lexington	WKLE	46
Louisville	WKPC	15
Paducah	WSIU	8
Tri-Cities	WSBN	47
Louisiana		
Alexandria	KLPA	25
Baton Rouge	WLPB	27
El Dorado	KLTM	13
Lafayette	KLPB	24
Lake Charles	KLTL	18
Monroe	KLTM	13
New Orleans	WYES	12
Shreveport	KLTS	24
Maine		
Bangor	WMEB	12
Calais	WMED	13
Lewiston	WCBB	10
Presque Isle	WMEM	10
Maryland		
Annapolis	WMPT	22
Baltimore	WMPB	67
Frederick	WFPT	62
Hagerstown	WWPB	31
Oakland	WGPT	36
Salisbury	WCPB	28
Massachusetts		
Boston	WGBH	2
Springfield	WGBY	57
Holyoke	WGBY	57
Michigan		
Alpena	WCML	6
Bad Axe	WUCX	35
Bay City	WUCM	19
Detroit	WTVS	56
Flint	WFUM	28
Grand Rapids	WGVU	35
Kalamazoo	WGVU	35
	WGVK	52
Lansing	WKAR	23
Marquette	WNMU	13
Mt. Pleasant	WCMU	14
Saginaw	WFUM	28
Traverse City	WCMW	21
Minnesota		
Austin	KYIN	24
Duluth	WDSE	8
La Crescent	WHLA	31
Mason City	KYIN	24
Minneapolis-St. Paul	KTCI	17
Superior	WDSE	8
Mississippi		
Biloxi	WMAH	19
Bude	WMAU	17
Columbus	WMAB	2
Gulfport	WMAH	19
Greenville	WMAO	23
Greenwood	WMAO	23
Jackson	WMPN	29
Meridian	WMAW	14
Oxford	WMAV	18
Missouri		
Hannibal	WQEC	27
Joplin	KOZJ	26
Kansas City	KCPT	19
Springfield	KOZK	21
St. Louis	KETC	9
Pittsburg	KOZJ	26
Montana		
Bozeman	KUSM	9
Butte	KUSM	9
Nebraska		
Bassett	KMNE	7
Hastings	KHNE	29
	KUON	12
Lexington	KLNE	3
Lincoln	KUON	12
Merriman	KRNE	12
Norfolk	KXNE	19
North Platte	KPNE	9
Omaha	KYNE	26
Scottsbluff	KTNE	13
Nevada		
Las Vegas	KLVX	10
Reno	KNPB	5
New Hampshire		
Durham	WENH	11
Keene	WEKW	52
Littleton	WLED	49
New Jersey		
N. New Jersey	WNET	13
S. New Jersey	WHYY	12
New Mexico		
Albuquerque	KNME	5
Santa Fe	KNME	5
New York		
Albany-Schenectady	WMHT	17
Binghampton	WSKG	46
Buffalo	WNED	17
New York	WNET	13
Norwood	WNPI	18
Plattsburgh	WCFE	57
Rochester	WXXI	21
Schenectady	WMHT	17
Syracuse	WCNY	24
Watertown	WNPE	16

City	Station	Channel
North Carolina		
Asheville	WUNF	33
Charlotte	WUNG	58
Columbia	WUND	2
Greensboro	WUNL	26
Greenville	WUNK	25
Jacksonville	WUNM	19
Linville	WUNE	17
Raleigh-Durham	WUNC	4
Roanake Rapids	WUNP	36
Wilmington	WUNJ	39
North Dakota		
Bismarck	KBME	3
Drakinson	KDSE	9
Ellendale	KJRE	19
Fargo	KFME	13
Grand Forks	KGFE	2
Minot	KBME	3
Williston	KWSE	4
Ohio		
Akron	WVIZ	25
Athens	WOUB	20
Cleveland	WVIZ	25
Cincinnati	WCET	48
Columbus	WOSU	34
Dayton	WPTD	16
Lima	WBGU	27
Portsmouth	WPBO	42
Steubenville	WOUC	44
Toledo	WGTE	30
Youngstown	WNEO	45
Oklahoma		
Cheyenne	KWET	12
Eufaula	KOET	3
Oklahoma City	KETA	13
Tulsa	KOED	11
Oregon		
Bend	KOAB	3
Corvallis	KOAC	7
Eugene	KEPB	28
Klamath Falls	KFTS	22
Medford	KSYS	8
Portland	KOPB	10
Pennsylvania		
Altoona	WPSX	3
Erie	WQLN	54
Harrisburg	WITF	33
Johnstown	WPSX	3

City	Station	Channel
Lancaster	WITF	33
Philadelphia	WHYY	12
Pittsburgh	WQED	13
Scranton	WVIA	44
Wilkes-Barre	WVIA	44
Rhode Island		
New Bedford	WSBE	36
Providence	WSBE	36
South Carolina		
Allendale	WEBA	14
Beaufort	WJWJ	16
Charleston	WITV	7
Columbia	WRLK	35
Conway	WHMC	23
Florence	WJPM	33
Greenville	WNTV	29
Greenwood	WNEH	38
Huntington	WPBY	33
Rock Hill	WNSC	30
Spartanburg	WRET	49
Sumter	WRJA	27
South Dakota		
Aberdeen	KDSD	16
Brookings	KESD	8
Eagle Butte	KPSD	13
Lowry	KQSD	11
Martin	KZSD	8
Pierre	KTSD	10
Rapid City	KBHE	9
Vermillion	KUSD	2
Tennessee		
Chattanooga	WTCI	45
Jackson	WLJT	11
Johnson City	WSJK	2
Knoxville	WKOP	15
Memphis	WKNO	10
Nashville	WDCN	8
Texas		
Amarillo	KACV	2
Austin	KLRU	18
Corpus Christi	KEDT	16
Dallas	KERA	13
El Paso	KCOS	13
Ft. Worth	KERA	13
Harlingen	KMBH	60
Houston	KUHT	8
Lubbock	KTXT	5

City	Station	Channel
Odessa Midland	KOCV	36
San Antonio	KLRN	9
Temple	KNCT	46
Waco	KNCT	46
Utah		
Salt Lake City	KUED	7
Vermont		
Burlington	WCFE	57
Virginia		
Arlington	WETA	26
Charlottesville	WHTJ	41
Harrisonburg	WVPT	51
Lynchburg	WBRA	15
Norfolk	WHRO	15
Norton	WSBN	47
Petersburg	WCVE	23
Portsmouth	WHRO	15
Richmond	WCVE	15
Roanoke	WBRA	9
Washington		
Seattle	KCTS	9
Spokane	KSPS	7
Tacoma	KCTS	9
Yakima	KYVE	47
West Virginia		
Beckley	WSWP	9
Bluefield	WSWP	9
Charleston	WPBY	33
Clarksburg	WNPB	24
Huntington	WPBY	33
Parkersburg	WOUB	20
Weston	WNPB	24
Wheeling	WOUC	44
Wisconsin		
Appleton	WPNE	38
Eau Clair	WHLA	31
Green Bay	WPNE	38
La Crosse	WHLA	31
Madison	WHA	21
Menomonie	WHWC	28
Milwaukee	WMVS	10
Park Falls	WLEF	36
Rhinelander	WHRM	20
Wassau	WHRM	20
Wyoming		
Cheyenne	KTNE	13
Evanston	KUED	7

General setup information



Setting the RF unit

When connecting the VCR to the TV using only the antenna cable, you must set the RF UNIT switch on the rear of the VCR so that the TV can receive the correct signal from the VCR.
If you connect the VCR to the TV using the supplied audio/video cable, you can skip this step.

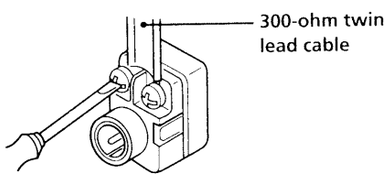
1 Set the RF UNIT switch on the rear of the VCR to CH3 or CH4, whichever channel is not used in your area. If both are used, set the switch to either channel.

2 Press POWER to turn on the VCR.

3 Press TV/VTR to turn on the VTR indicator in the VCR's display window.

4 Press CHANNEL +/– to display a channel number in the display window. Select an active channel number in your area.

5 Turn on your TV and set it to the channel you selected in step **1** (channel 3 or 4).
The selected TV channel broadcast appears on the TV screen. If the channels change when you press CHANNEL +/–, you have made the correct setting.
Whenever you use the VCR, set the TV to the channel selected in step **1**.



EAC-32 Antenna connector (not supplied)

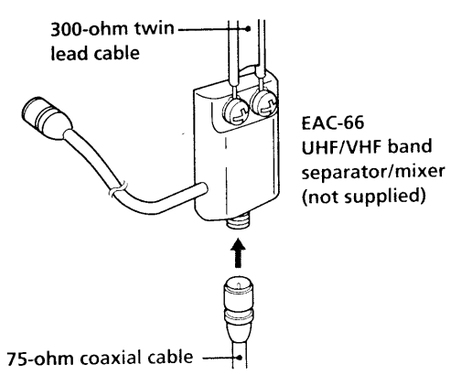
Attaching the external antenna connector

When using a 300-ohm twin lead cable for VHF/UHF antenna, use the EAC-32 antenna connector (not supplied) to connect the antenna to the VCR.

1 Loosen the screws on the antenna connector.

2 Wind the twin leads around the screws on the antenna connector.

3 Retighten the screws.



Attaching a UHF/VHF band mixer

When using both a 75-ohm coaxial cable and a 300-ohm twin lead cable for VHF/UHF antenna, use the EAC-66 UHF/VHF band separator/mixer (not supplied) to connect the antenna to the VCR.

1 Loosen the screws on the mixer.

2 Wind the twin leads around the screws on the mixer.

3 Retighten the screws.

4 Connect the 75-ohm coaxial cable to the mixer.

Troubleshooting

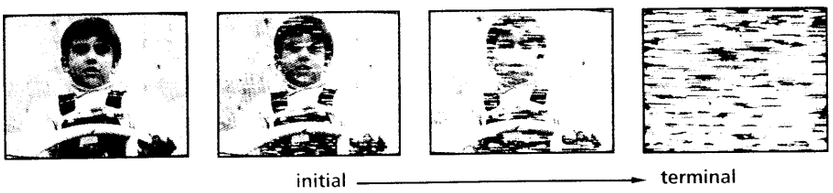
	Symptom	Remedy
Power	The POWER switch does not function.	• Connect the AC power cord securely.
	The power is turned on but the VCR does not operate.	• Moisture condensation occurs. Turn the power off, unplug the AC power cord and leave the VCR to dry for over an hour.
Clock	The clock has stopped and "-:--" lights in the display window.	• The clock stops if the VCR is disconnected from the wall outlet for more than three hours. Reset the clock (and timer).
Playback	The playback picture does not appear on the TV screen.	• Make sure the TV is set to the channel for the VCR. If you are using a monitor, set it to video input.
	The picture is not clear.	• Adjust the tracking with the TRACKING NORMAL/SLOW buttons. • The video heads are dirty (see below). Clean the video heads using a Sony T-25CL video head cleaning cassette. If this cleaning cassette is not available in your area, have the heads cleaned at your nearest Sony dealer (a standard service charge will be required). Do not use a commercially available wet-type cleaning cassette, as it may damage the video heads. • The video heads may have to be replaced. Consult your local Sony dealer for more information.
	The picture rolls vertically during picture search.	• Adjust the vertical hold control on the TV or monitor.
	The picture has no sound.	• The tape is defective. Use a new tape.
	Both main and SAP sounds are heard.	• When you play a bilingual tape, make sure the AUDIO MIX option in the ADVANCED OPTIONS menu is set to OFF.
StarSight	The StarSight program guides and information pop-up don't appear on the TV screen when you press the GUIDE, THEME, or INFO buttons.	• Make sure the VCR is turned on. • If using a cable box, make sure it is turned on. • Make sure the TV is set to the channel for the VCR. If you are using a monitor, set it to video input. • Make sure the VCR is in stop mode.
	The program guides aren't renewed.	• Do not use the VCR during the scheduled data reception time so that the VCR can receive the StarSight data. If you want to use the VCR during the scheduled data reception time, change the data reception time. (See page **63**.)

Call the StarSight Help Desk at 1-800-628-STAR.

(continued)

Symptoms caused by contaminated video heads

• Normal picture • Rough picture • Unclear picture • No picture (or black & white screen appears)



initial ——————→ terminal

	Symptom	Remedy
Recording	A TV program does not appear on the TV screen.	• Make sure the TV is set to the channel for the VCR. If you are using a monitor, set it to video input.
	TV reception is poor.	• Adjust the TV antenna.
	The tape is ejected when you press ● REC.	• Check that the safety tab has not been removed.
	Nothing happens when you press ● REC.	• Make sure the tape has been wound to the beginning. • Select the correct source with the INPUT SELECT button. Select a channel number when recording TV programs; select "L1" or "L2" when recording from other equipment.
	No sound is recorded on the normal audio track.	• When not recording SAP sound, make sure the NORMAL AUDIO option in the ADVANCED OPTIONS menu is set to MAIN.
Timer recording	The timer does not operate.	• Check that the clock is set. • Make sure a program has been set for timer recording. • Make sure the programs on your timer settings have not already passed the current time. • Check that the cable box/DSS receiver is turned on. • The clock stops if the VCR is disconnected from the wall outlet for more than three hours. Reset the clock and timer. • When you use cable box control, make sure the CABLE BOX CONTROL option is set to ON.
	The TIMER indicator flashes.	• Make sure a tape has been inserted. • Check that the safety tab has not been removed. • Make sure the tape is not at its end.
Others	A tape cannot be inserted.	• Check that a tape isn't already in the tape compartment.
	The remote commander does not function.	• Make sure you are pointing the remote commander at the remote sensor on the VCR. • Replace all the batteries in the remote commander with new ones if they are weak.
	The channels on the VCR cannot be changed.	• Make sure the CABLE BOX CONTROL option is set to OFF.
	The tracking indicator does not appear on the screen.	• The recording condition of the tape is very poor and tracking cannot be adjusted.
	You cannot control other TVs.	• Set your TV's code number. The code number resets to 1 when you replace the batteries of the remote commander.
	The VCR needs to be cleaned.	• Clean the cabinet, panel, and controls with a dry soft cloth, or a soft cloth slightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine.
	The reception is not clear.	• Set AFT to ON, or select FINE TUNING and adjust the picture in the TUNER PRESET menu. (See page **27**.)

If you have any questions or problems concerning your unit, please consult your nearest Sony dealer.

Specifications

System

Format
VHS NTSC standard

Video recording system
Rotary head helical scanning FM system

Video heads
Double azimuth 4 HEAD

Video signal
NTSC color, EIA standards

Tape speed
SP: $^{13}/_{8}$ inches/s (33.35 mm/s)
EP: $^{7}/_{16}$ inches/s (11.11 mm/s)
LP: $^{11}/_{16}$ inches/s (16.67 mm/s), playback only

Maximum recording/playback time
8 hrs. in EP mode (with T-160 tape)

Fast-forward and rewind time
Approx. 3 min. (with T-120 tape)

Tuner section

Channel coverage
VHF 2 to 13
UHF 14 to 69
CATV A-8 to A-1, A to W, W+1 to W+84

Antenna
75-ohm antenna terminal for VHF/UHF

Inputs and outputs

LINE IN 1 and 2
VIDEO IN, phono jack (1 each)
Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
AUDIO IN, phono jack (2 each)
Input level: 327 mVrms
Input impedance: more than 47 kilohms

LINE OUT
VIDEO OUT, phono jack (1)
Output signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
AUDIO OUT, phono jack (2)
Standard output: 327 mVrms
Load impedance: 47 kilohms
Output impedance: less than 10 kilohms

CONTROL S IN
Mini jack (1)

CABLE BOX CONTROL
Mini mini jack (1)

Timer section

Clock
Quartz locked

Timer indication
12-hour cycle

Timer setting
Conventional timer: 8 programs up to one month
StarSight timer: 25 programs up to four weeks

Power back-up
Built-in self-charging capacitor
StarSight data: 2 hours
VCR clock: 3 hours

General

Power requirements
120 V AC, 60 Hz

Power consumption
28 W (max.)

Operating temperature
41°F to 104°F (5°C to 40°C)

Storage temperature
–4°F to 140°F (–20°C to 60°C)

Dimensions
Approx. 17 × 4 × 12 $^{3}/_{4}$ inches (w/h/d)
(Approx. 430 × 103 × 323 mm) including projecting parts and controls

Mass
Approx. 12 lb 1 oz (5.5 kg)

Supplied accessories

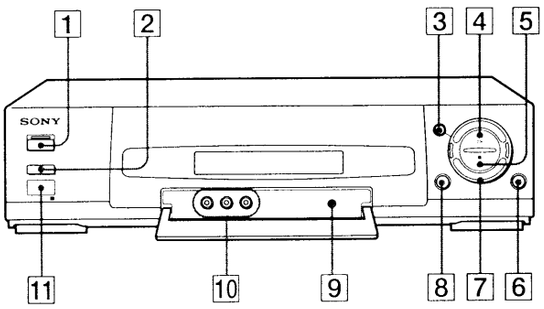
Remote commander (1)
Size AA (R6) batteries (2)
75-ohm coaxial cable with F-type connectors (1)
AC power cord (1)
Audio/video cable (3 phono to 3 phono) (1)
Cable Mouse (cable box controller) (1)

Design and specifications are subject to change without notice.

Index to parts and controls

Refer to the pages indicated in ( ) for details.

Front panel



[1] POWER switch/indicator

[2] ⏏ EJECT button (33)

[3] ⏸ PAUSE button (33)

[4] ▷ PLAY button (33)

[5] ■ STOP button (33)

[6] ● REC button (41, 45)

[7] DUAL MODE SHUTTLE ring (33, 53)

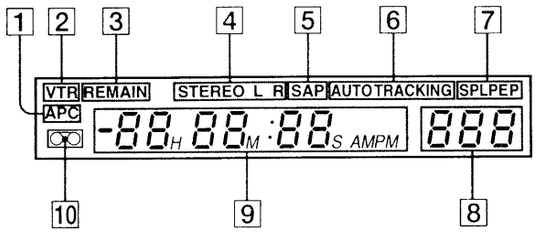
[8] TIMER indicator (42, 46)

[9] EASY SET UP button (11)

[10] LINE IN 2 VIDEO/AUDIO L/R jacks (58)

[11] Remote sensor

Display window



[1] APC indicator (54)

[2] VTR indicator (46)

[3] REMAIN indicator (34)

[4] STEREO L/R indicator (35)

[5] SAP indicator (50)

[6] AUTO TRACKING indicator (54)

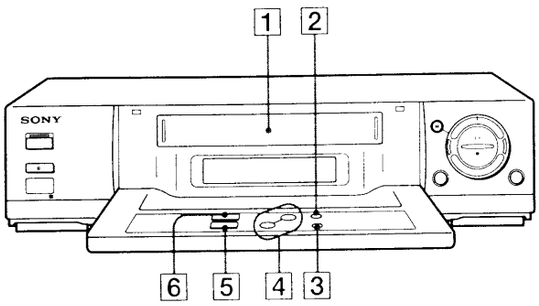
[7] Tape speed indicator (45)

[8] Line/channel indicator (45)

[9] Time counter/remaining time counter/clock (34)

[10] Tape indicator

Front cover, with cover opened



[1] Tape compartment

[2] QUICK TIMER button (46)

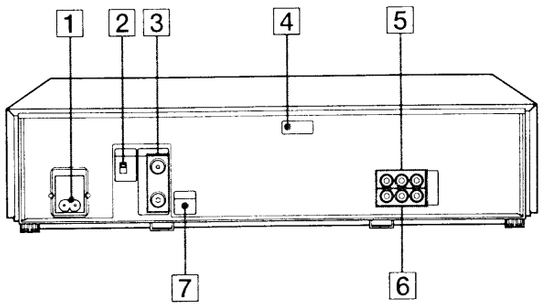
[3] TAPE SPEED (SP/EP) button (42, 45)

[4] CHANNEL +/– buttons (45)

[5] INPUT SELECT button (45, 59)

[6] TV/VTR button (46)

Rear panel



[1] AC IN connector

[2] RF UNIT switch (68)

[3] VHF/UHF connectors (10, 12, 14, 16, 18)

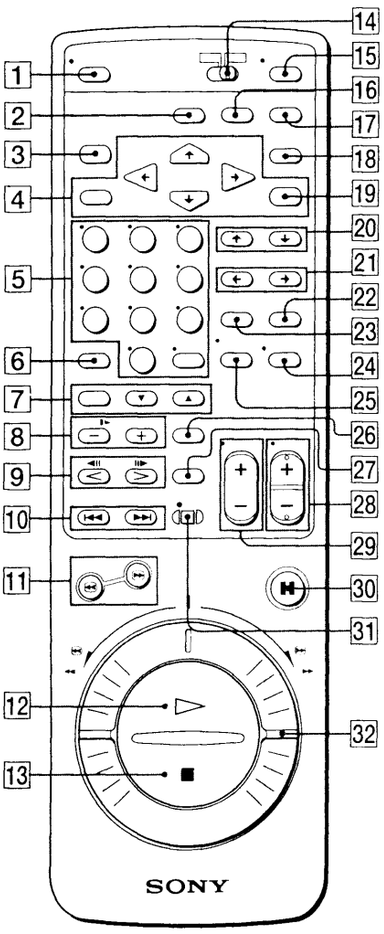
[4] CABLE BOX CONTROL jack (10, 18)

[5] LINE IN 1 AUDIO L/R/VIDEO jacks (18, 58)

[6] LINE OUT AUDIO L/R/VIDEO jacks (9, 58)

[7] CONTROL S IN jack (60)

Remote commander



You can use the emerald green color buttons to operate StarSight.

[1] TV/VTR button (46)

[2] GUIDE button (21, 36)

[3] THEME button (21, 38)

[4] Menu operation buttons (24)
MENU button
CURSOR ↑/↓/←/→ buttons
EXECUTE button

[5] Channel number buttons and ENTER button (28)

[6] INPUT SELECT button (45, 59)

[7] TRACKING buttons (54)
▼/▲ NORMAL SLOW
STILL ADJUST buttons
AUTO/MANUAL button

[8] ▮► SLOW –/+ buttons (53)

[9] ◄▮▮ /▮▮► FRAME </> buttons (53)

[10] ⏮ /⏭ INDEX SEARCH buttons (55)

[11] ⏪/⏩ SEARCH buttons (53)

[12] ▷ PLAY button (33)

[13] ■ STOP button (33)

[14] [TV]/[VTR] remote control switch (6)

[15] POWER switch

[16] LIST button (44)

[17] TIMER CLEAR/CANCEL button (44, 51)

[18] EXIT button (36)

[19] EXECUTE/INFO button (36)

[20] PAGE ↑/↓ buttons (36)

[21] DAY ←/→ buttons (36)

[22] COUNTER RESET button (34)

[23] COUNTER/REMAIN button (34)

[24] DISPLAY button (34)

[25] AUDIO MONITOR button (35)

[26] SKIP button (53)

[27] TAPE SPEED button (42, 45)

[28] CH +/– buttons (45)

[29] VOL +/– buttons

[30] ▮▮ PAUSE button (33)

[31] ● REC button (41, 45)

[32] DUAL MODE SHUTTLE ring (33, 53)

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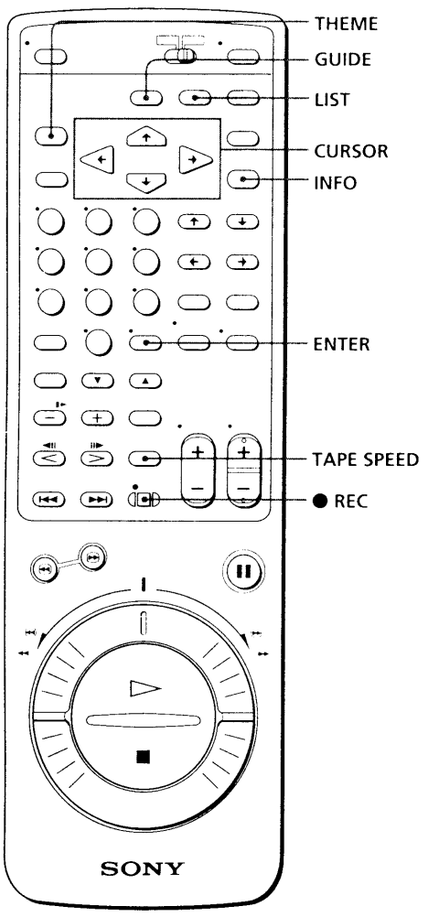
Quick reference to using StarSight



You can use the emerald green color buttons to operate StarSight.

Using the StarSight program guides

Before you start...

- Turn on your TV and tune in to the VCR
  If using a cable box, turn it on.
- Press POWER to turn on the VCR.

Grid Guide

Press GUIDE.

Channel Guide

Press GUIDE twice.

Theme Guide

1 Press THEME.
2 Press the CURSOR (↑/↓) buttons to select the category, then press ENTER.
3 Press the CURSOR (↑/↓) buttons to select the subcategory, then press ENTER.

Information pop-up

Press INFO while watching a program received through the VCR or highlighting a StarSight program guide selection.

Recording TV programs from StarSight

Before you start...

- Turn on your TV and tune in to the VCR
  If using a cable box, turn it on.

1 Insert a tape.
2 Display one of the StarSight program guides.
3 Press the CURSOR (↑/↓/←/→) buttons to select the program.
4 Press ● REC.
5 Press the CURSOR (↑/↓) buttons to select ONCE, DAILY or WEEKLY.
6 Press TAPE SPEED to select the tape speed, SP or EP.
7 Press ● REC.
  If using a cable box, leave it on.

To check the StarSight timer settings

Press LIST.

To activate StarSight, call 1-800-643-STAR.
For the StarSight Help Desk, call 1-800-628-STAR.

If you have any questions about this product, you may call: **Sony Customer Information Center** 1-800-222-SONY (7669)
or write to: **Sony Customer Information Center** Sony Drive, Mail Drop #T1-11, Park Ridge, NJ 07656

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